— LATIN AMERICA @ WAR No.8 —

AERIAL OPERATIONS IN THE REVOLUTIONS OF 1922 & 1947 IN PARAGUAY

— THE FIRST DOGFIGHTS IN SOUTH AMERICA —

ANTONIO LUIS SAPIENZA

LATIN AMERICA @ WAR SERIES

Helion & Company Limited
Unit 8 Amherst Business Centre
Budbrooke Road
Warwick
CV34 5WE
England
Tel. 01926 499 619
Fax 0121 711 4075
Email: info@helion.co.uk
Website: www.helion.co.uk
Twitter: @helionbooks
Visit our blog http://blog.helion.co.uk/

Published by Helion & Company 2018
Designed and typeset by Farr out Publications, Wokingham
Cover designed by Paul Hewitt, Battlefield Design (www.battlefield-design.co.uk)

Text © Antonio Luis Sapienza Fracchia 2018
Illustrations © as individually credited
Color profiles drawn by JP Vieira © Helion & Company Limited 2018
Maps drawn by George Anderson © Helion & Company 2018

Every reasonable effort has been made to trace copyright holders and to obtain their permission for the use of copyright material. The author and publisher apologize for any errors or omissions in this work, and would be grateful if notified of any corrections that should be incorporated in future reprints or editions of this book.

ISBN 978-1-914377-58-7

British Library Cataloguing-in-Publication Data
A catalogue record for this book is available from the British Library
All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form, or by any means, electronic, mechanical, photocopying, recording or otherwise, without the express written consent of Helion & Company Limited.

We always welcome receiving book proposals from prospective authors.

CONTENTS

Foreword 1 2
Foreword 2 2
Introduction 2

PART ONE: Aerial Operations in the Revolution of 1922
1 Brief historical background 3
2 The creation of the Government Air Arm 4
3 The formation of the Revolutionary Air Arm 6
4 First bombing and reconnaissance missions 6
5 The first dogfights in South America 9
6 The last air raids 12
7 The official foundation of the Military Aviation School 12
8 The end of the conflict 12
9 Conclusions 13
10 The Paraguayan Military Aviation aircraft in 1922 14

PART TWO: Aerial Operations in the Revolution of 1947
1 Post Chaco War aircraft acquisition in Italy 15
2 Paraguayan Military Aviation Mission to Italy 17
3 Lend-Lease Programme aircraft for Paraguay 17
4 Paraguayan Military Aviation Missions to Brazil 19
5 Paraguayan pilots flying war missions during the South Atlantic Campaign in WWII 20
6 The political situation in Paraguay in the 1940s 21
7 The situation of the Armed Forces at the beginning of the conflict 21
8 The Paraguayan Air Arm split in two at the beginning of the Revolution of 1947. Operation ***Runaway*** ***22***
9 Bombing and reconnaissance missions 25
10 Operation ***Detachment*** ***32***
11 The Sikorsky VS.44A raid 33
12 Dogfights 33
13 The final days of the Revolution 34
14 Conclusions 34
15 The Paraguayan Military Aviation aircraft in 1947 37

Sources 39
Acknowledgments 40
About the author 40

Foreword 1

Of the air wars in Latin America, there are very few which are known to most people, even amongst aviation historians of the region. Some of the conflicts are still unknown to many and they are part of the very rich history of Latin America through the 20th century.

In this book, my friend Tony Sapienza, whom I think is the only serious researcher of Paraguayan aviation, explores the details of two of the main conflicts in which the aviation in this country was involved.

While the Chaco War is the best-known conflict in which the Paraguayan aviation was involved, the two revolutions that Tony describes in this book are almost unknown to wider audiences. Until reading it, I was convinced that the first air combat in South America occurred during the Chaco War, I am now aware that it also happened in Paraguay, but ten years before!

I think this book is essential to understand a very interesting part of Latin American aviation and know about the first air combats in the region and some of the first combat sorties of any kind in Latin America.

Also, the story of the Revolution of 1947 shows how important the aviation became, even in small numbers, for reconnaissance and light attack, playing an important role on both sides.

Knowing of the difficulties of research in Latin America, due to the lack of proper official archives, that a lot of information was lost, participants in these cases are long dead and that politics still influence the way the story is told, the work performed by Tony Sapienza is worthy of respect, rescuing an almost forgotten, but no less important, piece of Latin American aviation history.

Santiago Rivas
Aviation Historian

Foreword 2

In the mid-20th Century, there was a very popular advertising campaign in several newspapers in Buenos Aires, Argentina, promoting a fan, using the slogan *"it has more revolutions (RPM) than Paraguay*." The above-mentioned century was full of revolutions and civil wars in that country, dominated by two political parties – the *Colorados* (reds) and the *Liberales* (blues) – the latter deeply divided in two factions, the *Cívico* (Civics) and the *Radicales* (Radicals).

Between 1904 and 1947, internal wars shook the unstable political environment and, as a consequence of that, there were almost 30 different presidents in Paraguay. The overall population was so used to armed uprisings that at the sound of thunder, people used to say "*aipovapa ára terapa Jara?*" (in Guarani language meaning "*is that the weather or Jara?*"), referring to Colonel Albino Jara, one of the most famous revolutionary leaders in Paraguay, who participated in the Revolutions of 1904, 1908 and 1911. On 17 January 1911, at only 33 years old, he proclaimed himself President of Paraguay after overthrowing President Dr. Manuel Gondra through a *coup d'etat*. He was overthrown by another coup in 1912, during which he was fatally wounded. Would he have lasted more time in power if he had had air power?

In the three revolutions mentioned above, the sky remained clear of heavier-than-air flying machines, and although there were a few flights in the 1910s, it was in the Revolution of 1922 when air power was incorporated as a weapon in Paraguay. The author of this book, aviation historian Antonio Luis Sapienza, started the chronological review of warplanes, pilots, sorties and aerial power used by both sides, the government and the revolutionaries, with data and pictures that have not been published before. Aviators like Francisco Cusmanich, Sidney Stewart, Nicola Bo, Patrick Hasset and others who flew SVA.5s, SVA.10s, Armstrong Whitworth F.K.8, Breguet 14, SPAD S.XX or SAML A.3 for the government, and Angelo Pescarmona and others also flying SVA biplanes for the revolutionaries, were the main characters of this conflict, including the first air combats in South America, described in detail in this book.

Even though 10 years later, the Chaco War against Bolivia broke out, there was an internal period of peace of 25 years. In 1947, a bloody internal conflict caused destruction, pain and death once again. In only five months, there were more than 30,000 casualties, the same number as in the three-year Chaco War, and a huge number of people exiled for political reasons. Before the outbreak of the conflict, professional military officers and NCOs had either been relegated to unimportant duties or arrested, which caused tremendous discomfort among the institutionalist military towards General Higinio Morinigo's regime. The Paraguayan Air Arm split into two factions, one that remained loyal to the government, and a revolutionary one. Once again, military aviation had an important role to play in the conflict, especially regarding the conduct of bombing and strafing missions, with devastating results. Both sides' air raids are well detailed in the book, including aircraft, crews and outcomes, month by month.

Javier Yubi
Journalist

Introduction

In the first half of the 20th Century, there were several revolutions in Paraguay, starting in 1904, then 1908, 1911-12, 1922-23, 1936 and finally 1947. In 1922, a huge internal crisis in the Liberal Party led to a bloody revolution and for the first time in the history of the country, both sides decided to use aerial power against the enemy. There were no airplanes available in Paraguay at that time, and very few pilots – just three – so both the government led by President Eusebio Ayala, and the revolutionaries led by a couple of army colonels, Chirife and Mendoza, searched for foreign pilots and planes in Buenos Aires, Argentina. Many WWI veterans immigrated to Latin America in search of a better life, either opening flight schools or offering their services in local conflicts, and this is how some of them came to Paraguay with their own aircraft, which were bought by either the government or the revolutionaries. The three Paraguayan pilots offered their services to the government, which soon established the first Air Base near the capital, in a wide-open field called *Ñu-Guazú* – a Guaraní name meaning "Big Field." Meanwhile, the rebels organized their own air base, first near the city of Villarrica, and later

in Cangó. The main types used by both sides were the Ansaldo SVA.5 and SVA.10, but the government would also purchase a Breguet 14, an Armstrong Whitworth F.K.8, a SPAD S.XX and a couple of SAML A.3. Inevitably, the first dogfights soon took place, as did bombing raids, the strafing of enemy troops, and recce missions on both sides. Finally, in mid-1923, the revolutionaries were defeated and one of the consequences was the foundation of the Military Aviation School.

On the other hand, the Revolution of 1947 lasted just a few months, but it was as bloody as the previous one, if it was not more so. The government, supported by the Colorado Party, fought against the revolutionaries composed of almost 70% of the Army, Navy and Air Arm, supported by the Liberal, Febrerista and Communist parties. The Air Arm split in two, but at the beginning most of the aircraft in flying condition were used by the revolutionaries, whose main base was the city of Concepción, in the north of the country. Soon, the government air arm had some aircraft in flying condition, although most of the Italian types purchased in 1939 were out of service. Only Lend-Lease trainers, such as PT-19s, BT-13s, and AT-6s, were available to be used for reconnaissance and light bombing raids, using mortar ammunition. Some weeks later, the loyalists would repair some Caproni AP-1s to be flown against the rebels. There were a few dogfights, but no aircraft were shot down in them, although some aircraft were lost to anti-aircraft fire. In the end, the government would defeat the revolutionaries, mainly because of the lack of tactical organization in the rebel forces.

The initials PAM (*Piloto Aviador Militar*, Military Aviator Pilot), PAN (*Piloto Aviador Naval*, Naval Aviator Pilot), MAM (*Mecánico de Aviación Militar*, Military Aviation Mechanic), and Obs. Aer. (Air Observer-gunner) were used together with the military rank to identify the role in each mission.

These two conflicts were previously covered by two books; Daniel P. Hagedorn's *Latin American Air Wars and Aircraft, 1912-1969,* and Adrian English's *Revolutions, Civil Wars and Coups D'Etat. Internal Disturbances in Paraguay during the 20*th *Century,* some years ago, but this is the first in-depth account of them with data, pictures, maps and profiles, some of them never published before.

Antonio Luis Sapienza Fracchia
Asunción, May 2017

PART ONE: Aerial Operations in the Revolution of 1922

1 Brief historical background

The then President of Paraguay, Dr. José P. Montero, signed Decree Nr. 11.027 on 3rd January 1920, through which the construction of a building and a hangar for the Military Aviation School was authorized. On 26th April, another decree was signed by the president to locate the above-mentioned school in a wide-open field, called Ñu-Guazú, near the capital, Asunción. Some months later, army Captain Hernán Dalquist was appointed as director of the Military Aviation School, and Lt. Oscar Lagrave, a WWI veteran French pilot, was hired as a flight instructor. The first students were Mateo Telles, Aniceto Garcia, Atilio Ibañez Rojas, Eulogio Osorio and N. Garcia. Due to the lack of airplanes for flight instruction, they all had classes on several subjects, and, of course, they were kept busy preparing the infrastructure of the school.

In 1920, there were elections in Paraguay and Dr. Manuel Gondra was elected President. Due to political instability, Dr. Gondra and his Vice President Dr. Félix Paiva resigned on 19th October 1921, and the Congress appointed Senator Dr. Eusebio Ayala as an interim president. He was supposed to organize a new election, but the delay in doing so caused a political crisis which in turn caused a bloody revolution in 1922, led by two army colonels, Adolfo Chirife and Pedro Mendoza, supported by half of the military forces and a faction of the Liberal Party led by ex-president Eduardo Schaerer. Dr. Ayala tried to avoid the crisis by organizing elections at the end of that year, but it was too late.

The Revolutionary Leaders: left to right, Colonel Adolfo Chirife, Colonel Pedro Mendoza and former President Eduardo Schaerer. (*La Revolución de 1922. Tomas de los Santos*)

Three Presidents in three years: left to right, Dr Manuel Gondra 1920–21, Dr Eusebio Ayala 1921–23 and Dr Eligio Ayala 1923–24. (*Academia Liberal de la Historia*)

At that time, the Paraguayan Army, with a total strength of 2,500 men, was organized as follows:

- 1st Military Zone: One cavalry squadron and a section of heavy machine guns at Concepción, and small frontier detachments in Bella Vista, Pedro Juan Caballero, San Carlos and Capitán Bado.
- 2nd Military Zone: One battalion of infantry, a company of heavy machine guns and a group of artillery, with two mountain batteries, in Paraguarí.
- 3rd Military Zone: The Presidential Escort Squadron, a company of infantry and a section of heavy machine guns at Asunción; a company of engineers at Villa Hayes; and a squadron of cavalry at San Ignacio, in the south-west.
- 4th Military Zone: One battalion of infantry and a company of heavy machine guns in Villarrica, plus an independent infantry company and a section of machineguns in Encarnación.
- 5th Military Zone: Frontier detachments in Bahía Negra and Fuerte Olimpo, and small garrisons in Fortines General Bruguez, General Resquín, General Delgado and General Aquino in the Chaco, totalling no more than 200 effectives in all.

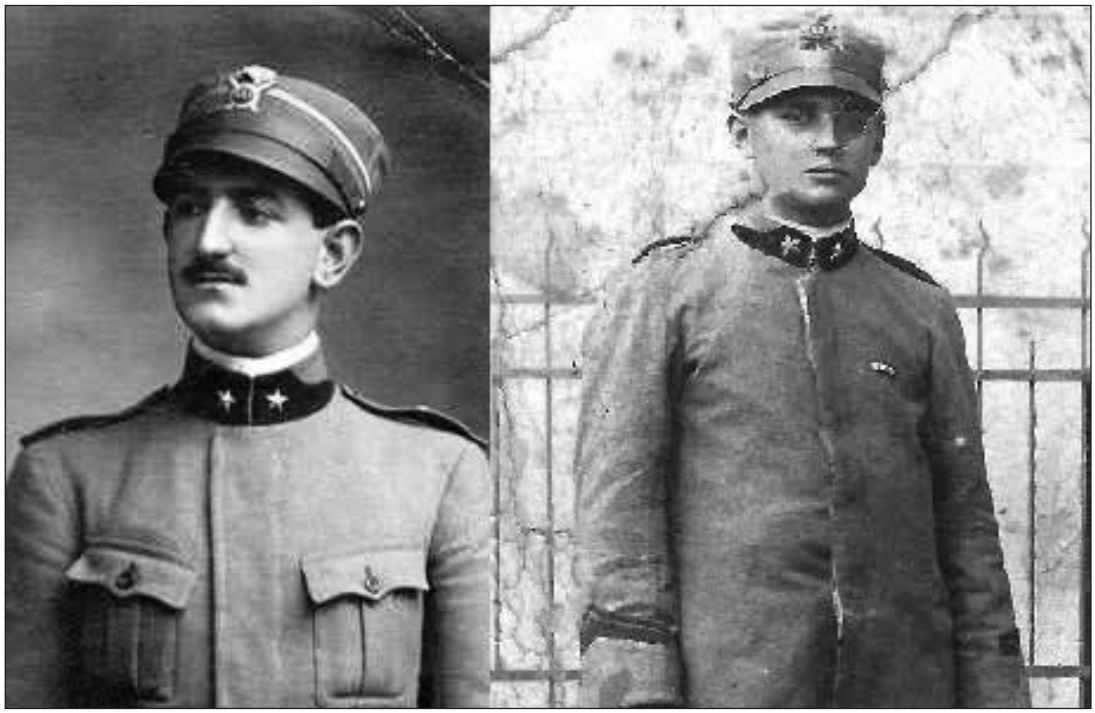
The *Constitutionalists* or revolutionaries, thus disposed of two full infantry battalions, plus an independent rifle company; a squadron of cavalry; two companies and two sections of heavy machine-guns, plus a group of mountain artillery with two batteries, totalling approximately 1,700 effectives.

The Government could count on only a single company of infantry and a section of heavy machine guns, the Escort Squadron, plus one other squadron of cavalry, a company of engineers and the cadets and faculty of the Military School, totalling approximately 600 men in all, plus the 250-man Navy with the 150-ton gunboat *Adolfo Riquelme* with two 3-inch guns, the 180-ton patrol craft *Triunfo*; and the 80-ton patrol craft *Coronel Martinez* – each with a single 3-inch gun. Since June 1922, the Paraguayan Navy had started a blockade of the city of Encarnación, then in the hands of the rebel forces.

2 The creation of the Government Air Arm

Full-scale fighting between the factions started in mid-May. The insurgents, led by Colonel Chirife, initially gathered at Paraguarí on 27th May, being joined by large numbers of civilian sympathizers, and delayed for almost two weeks – marked by futile peace negotiations which included an offer by President Ayala to withdraw his veto of the controversial electoral law – before commencing a slow advance on Asunción, pausing at Luque. A few days later, one of the Paraguayan pilots, Sgt. Francisco Cusmanich, who was actually retired from the army and was living in Buenos Aires, offered his services to the government. He was an instructor in one of the many flight schools in the Argentinean capital, associated with a First World War veteran, Captain Sidney J. Stewart, who owned an Armstrong Whitworth F.K.8 biplane. Stewart served in 27th, 40th and 208th Squadrons of the Royal Flying Corps during the Great War. Cusmanich convinced Stewart to follow him in his adventure to Paraguay and they both travelled to Asunción by ship, taking the F.K.8 with them in

The first two pilots of the Government Air Arm. (*Revolución de 1922. Tomas de los Santos*)



Two Paraguayan pilots, Captain Carlo de Paoli (left) and Lt. Francesco Montanaro (right), WWI veterans of the Italian Military Aviation. (*Author's files*)

Sgt. Nicola Bo (left), an Italian First World War pilot, posing with Sgt. Antonio Cusmanich, Paraguayan gunner and observer, in front of one of the Government Ansaldo SVA.10s at Ñu-Guazú Air Base at the beginning of the Revolution of 1922. (*Author's files*)

Sgt. Cosimo Damiano Rizzotto, an Italian First World War ace, hired by the Government Air Arm. (*Author's files*)

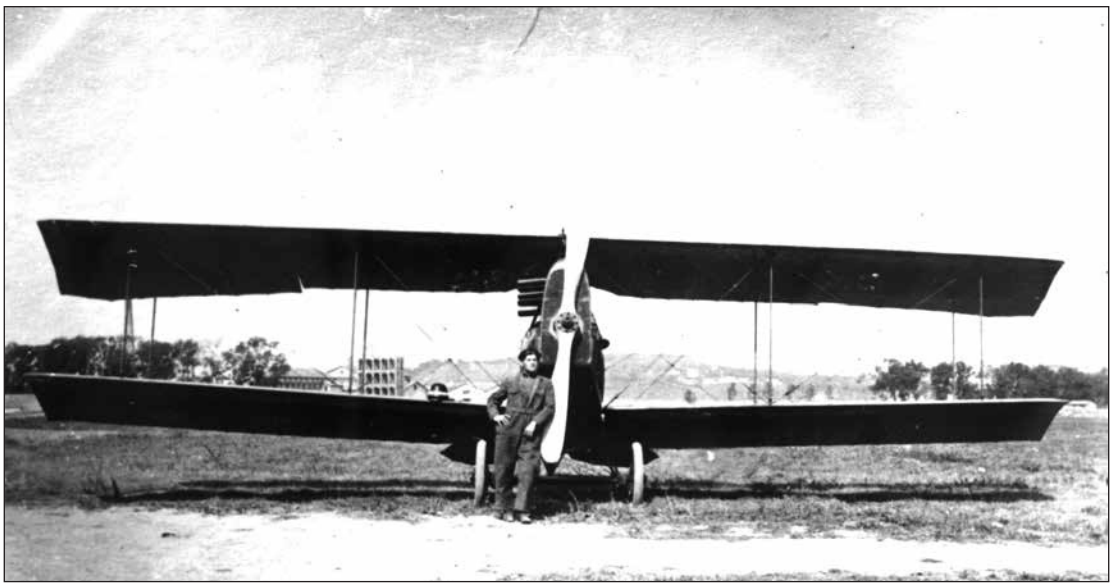
a wooden crate. They arrived in Asunción on 19 June 1922, and the crate was opened in the port and a crane placed the fuselage and the wings on a flat-bed wagon of the train to be taken to Ñu-Guazú. Once there, the F.K.8 was assembled and tested by Stewart on the 23rd, and it was conveniently named *Presidente Ayala,* being the first airplane of the Government Air Arm.

There were two other Paraguayan pilots, and they were both First World War veterans of the *Corpo Aeronautico Militare* (Italian Military Aviation) – Captain Carlo de Paoli, who served in the *61*st *Squadriglia,* flying Savoia Pomilio SP.4 aircraft in 1917-1918, and Lt. Francesco Montanaro – who offered their services to the government, being accepted into the Air Arm.

Meanwhile, the government also hired another First World War Italian veteran, Sgt. Nicola Bo, former member of the Italian Military Mission in Argentina. During the Great War, he served in the *2*nd *Sezione SVA* of the *XV Gruppo* in Ponte San Pietro and later in the *6*th *Sezione SVA* of the *88*th *Squadriglia* of the *IX Gruppo* in Castenedolo, and shot down three enemy planes. Bo immediately travelled to Paraguay by ship, taking an Ansaldo SVA.5 with him in a wooden crate. Since he had many contacts in Buenos Aires, the government asked him to hire more pilots with their planes, and he did so. Between the months of July and August 1922, more pilots joined the Government Air Arm; Sgt. Cosimo Damiano Rizzotto, who served in the *77*th *Squadriglia* flying Nieuport XIs and later SPAD VIIs, and became an ace shooting down 5 enemy aircraft; Ottaviano Pian and Sardi, all First World War Italian pilots, together with RFC veteran Lt. Patrick Hasset, and a Swiss pilot whose name was not recorded. They all brought more aircraft to Paraguay, including one more Ansaldo SVA.5, a SVA.10, a couple of SAML A.3s, a SPAD Hebermont S.XX and a Breguet 14. There were also two aircraft mechanics in the list, Giuseppe Bo, Nicola's brother, and Giuseppe Barbenza, both Italians. By mid-July 1922, the Government Air Arm had a total of 8 aircraft at Ñu-Guazú AFB. Once the government learned that the rebels had also acquired some aircraft, the Paraguayan roundel was painted on almost all the biplanes serving the government, and the Paraguayan flag colours were painted onto the rudder, although no serials were applied, at least during the conflict.

3 The formation of the Revolutionary Air Arm

On the other side, since the revolutionaries did not have many resources but also wanted to have aerial support, their air arm was more modest. It was officially called *Aviación Constitucionalista* (Constitutionalist Aviation). They could only hire very few pilots; one of them being Sgt. Angelo Pescarmona, another First World War Italian veteran, who served in the *131*st *Squadriglia*; Mazzolini, also Italian; an American citizen, Dean Ivan Lamb; and a few others whose names were not recorded. They could only bring six aircraft, three SVA.5s and three SVA.10s. Their first air base was established near the city of Villarrica, then in the hands of the rebel forces, but it was later transferred to the town of Cangó (the present city of General Artigas), in the south of Paraguay. They could not hire any aircraft mechanics, so aircraft maintenance and minor repairs were done by the pilots. Neither nationality markings nor serials were applied to the rebel planes.



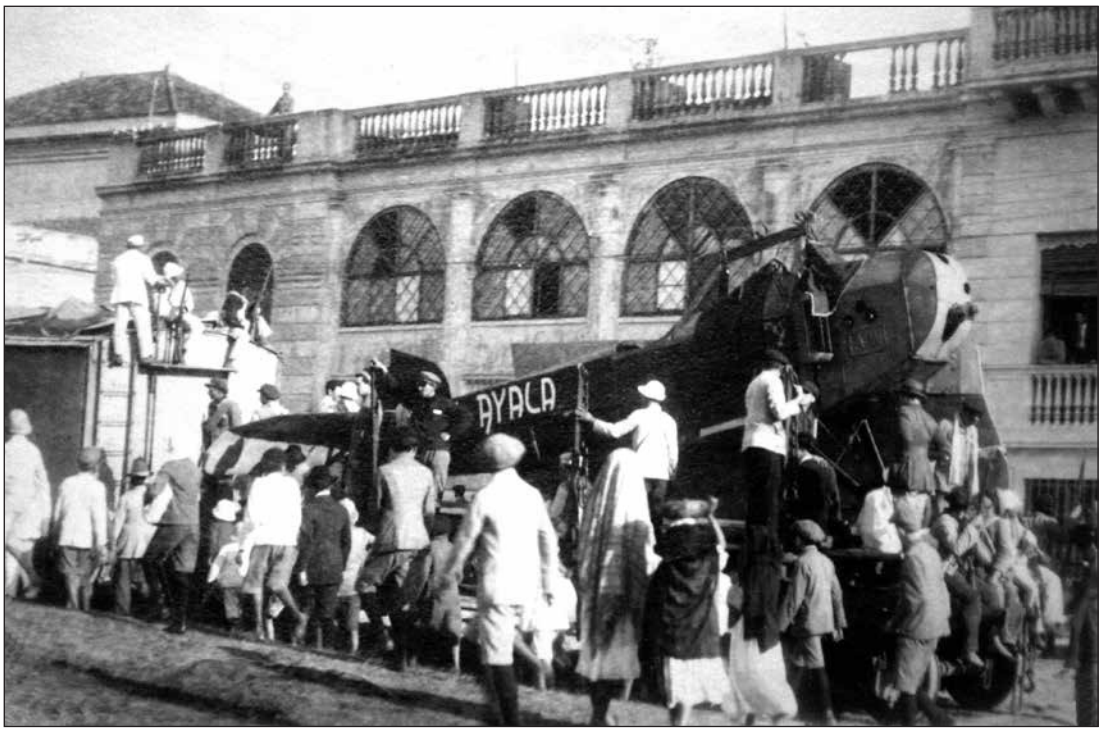
Sgt. Angelo Pescarmona, an Italian First World War veteran, hired by the Revolutionary Air Arm. (Roberto Gentilli)

4 First bombing and reconnaissance missions

In the morning of 9 June, the rebel forces had reached the outer suburbs of the capital where they were halted by entrenched Loyalist forces of only about 600 regular troops and many civilian volunteers, being commanded by the faculty and cadets of the Military School.

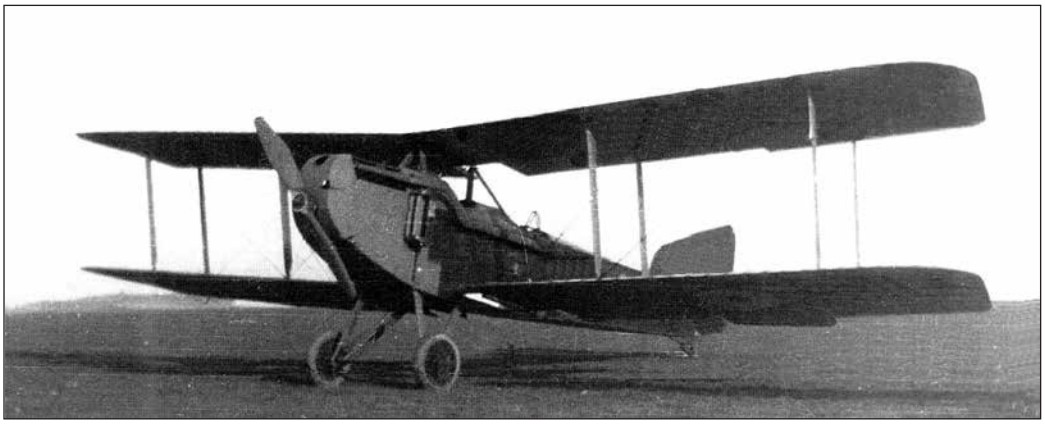
Despite some costly attacks, which were partly successful in some areas, the insurgents were eventually forced slowly back towards Paraguarí on 14 June, fighting delaying actions at Pirayú and Yaguarón, their morale having suffered severely with the failure of what should have been the easy conquest of the capital, and which was due – at least in part – to an almost complete lack of efficient logistic support, a problem which was to plague them throughout the conflict.

Having carried out a test flight over Asunción, the Government Air Arm Armstrong Whitworth F.K.8 crewed by Capt. Sidney Stewart as the pilot, and Sgt. Francisco Cusmanich as the gunner, carried out its first sortie in the afternoon of 28 June when it dropped pamphlets over Paraguarí urging the revolutionaries to re-consider their actions or suffer the consequences. These were ignored. so on the following day, the F.K.8 carried more than 100 kilos of bombs which were dropped on the rebel troop concentration near the city of Paraguarí, causing several casualties to the enemy. This biplane had a Vickers .303 machine gun for the pilot and a Lewis Gun for the gunner. On the following days, this F.K.8 with the same crew, together with a SVA.5 flown by Nicola Bo and a SAML A.3 flown by



The Government Air Arm Armstrong-Whitworth F.K.8 being carried by train to Ñu-Guazú Air Base after its arrival to Asunción. (*Instituto de Historia y Museo Militar del MDN*)

A Government Air Arm SAML A.3 at Ñu-Guazú Air Base. (*Javier Yubi)*



The Government Air Arm Armstrong Whitworth F.K.8. (*Author's files*)

Captain Carlo de Paoli, a Paraguayan First World War veteran, posing in front of a Government Air Arm Ansaldo SVA.5 at Ñu-Guazú Air Base. (*Author's files*)

The Paraguay Central Railway Company. (*Author's files)*

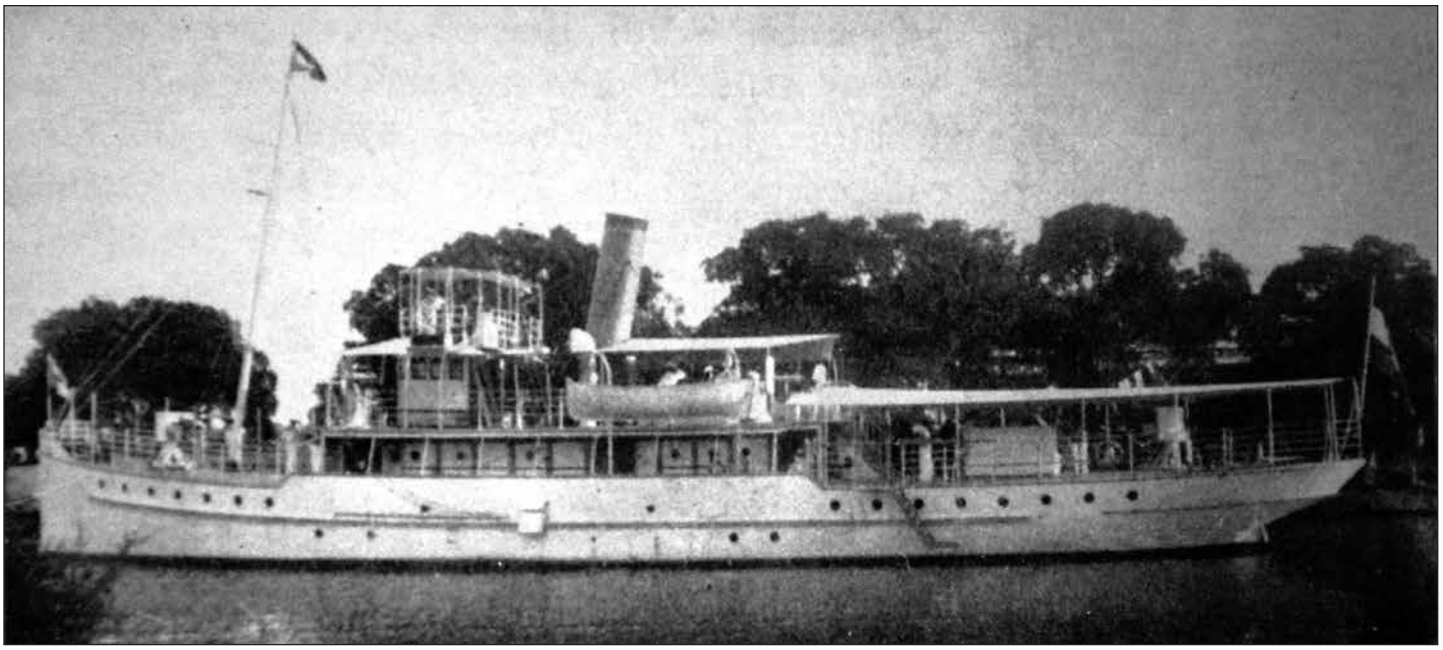
Sardi and Montanaro, carried out a number of reconnaissance sorties over the cities of Pirayú, Yaguarón and Paraguarí to observe the rebel troop movements. Every time the rebels saw the biplanes, they aimed with their rifles, but caused no damage to them.

During the first week of July, a rebel coastal battery of a 75mm Krupp gun and a 37mm Maxim cannon, which were deployed in Pacu-Cuá, near Encarnación, damaged the gunboat *Adolfo Riquelme* which had to retreat for repairs.

On 3rd July, the F.K.8 dropped a 25-kilo bomb on the rebel headquarters in Paraguarí and the explosion destroyed the building. On the following day, the F.K.8 and a SVA.5 flown by Sgt. Bo attacked a rebel train between the cities of Paraguarí and Escobar. The F.K.8 dropped a bomb but it did not explode, so the SVA.5 strafed several wagons. On the same day, both aircraft bombed the troop concentration in Yaguarón, causing many casualties to the enemy.

On 5 July a flight of loyalist aircraft consisting of the F.K.8 and a SVA.5 again dropped leaflets on rebel positions at Pirayú, Paraguarí and Yaguarón.

On 8 July, the F.K.8 with Stewart and Cusmanich, and a SVA.5 with Bo, took off from Ñu-Guazú for another bombing raid over Cerro León and Pirayú, but the SVA.5 had to return to its base due to mechanical problems. The F.K.8 was carrying some bombs under its wings, and also some hand grenades in the rear cockpit which Cusmanich was supposed to throw. Once they reached Pirayú, they were received by enemy fire, which they tried to avoid by climbing to a higher altitude. In the process of doing so, some bullets hit the engine and the fuel tank and soon a fire broke out. Stewart tried to make an emergency



The Paraguayan Navy Gunboat *Adolfo Riquelme* (*Armada Paraguaya*)

landing, but the biplane was soon engulfed with flames and began to fall. Cusmanich tried to avoid being burned alive by jumping out of the plane at a very low level, where the parachute was useless, and died on impact. The fire also detonated the bombs and the grenades, completely destroying the F.K.8, and killing Stewart instantly.

Their bodies were recovered by rebel troops and taken to the city of Pirayú, where they were handed to the civilian population. The coffins were then taken to the city of Ypacaraí in a horse drawn wagon and delivered to the government troops, and later taken to Asunción by train. Their funeral was carried out in the Military Pantheon of La Recoleta Cemetery in the capital. During the ceremony, with full military honours, Sgt. Bo flew a SVA.5 over it throwing a crown of flowers.

Following the loss of the towns of Pirayú and Yaguarón to the loyalists, despite a minor victory over a small loyalist detachment at Villa Florida, the position of the main rebel base at Paraguari had become untenable, and Colonel Chirife embarked the bulk of his troops on railway wagons on 14 July, and began a retreat in the direction of Villarica.

The government troops finally captured the city of Paraguarí on 15 July, and the rebels then established their headquarters in Villarrica. It was at this time that the revolutionaries got their first plane, an Ansaldo SVA.10, crewed by Sgt. Angelo Pescarmona, who started carrying out some reconnaissance missions. When returning from one of those missions, Pescarmona's plane experienced mechanical problems and had to make an emergency landing, causing damage that could not be repaired locally. The SVA.10 was abandoned there, and once the government troops had captured Villarrica, they took the biplane to Ñu-Guazú by train, and used it as a source of spare parts. A second biplane, a SVA.5 arrived some days later after a very eventful flight from Buenos Aires. Meanwhile, the rebels could not stop the government offensive and had to abandon Villarrica and made a tactical retreat to the towns of Cangó and Ka'i Puente (the last being the present-day city of Coronel Bogado), in the south of the country. They also controlled the important city of Encarnación and surroundings, on the Paraná River. It was then that two more SVA.5s, and a SVA.10, arrived for the rebels.

The Loyalist forces, under the overall command of Colonel Schenoni, continued their advance against stubborn resistance, until Sapucái fell to them, without firing a shot, on 23 July. The following day, after two hours of combat, Ybytymí also fell to the Loyalists, whilst the main body of the rebel force fled in trains eastwards towards the river Tebicuary-mí, taking their artillery and machine guns with them.

On 27 July the Loyalists broke through strongly entrenched rebel positions at Itapé and the rebels once more retreated along the line of the railway towards Salitre-Cué, which fell to the Loyalists on 30th July. On the following day, unopposed Loyalist forces entered Villarrica in triumph.

The first offensive sortie of the Rebel Air Arm took place on 31 July when a SVA.10, crewed by Pescarmona and an unidentified gunner, attacked the navy gunboat *Adolfo Riquelme,* strafing its deck and dropping some light bombs, but causing only minimal damage. The gunboat mentioned had a pair of 37mm Maxim machineguns and a pair of 76 mm Vickers cannons. The attack was repelled by the ship but caused no damage to the rebel plane. The Paraguayan Navy had stationed some vessels near the city of Encarnación to block its port, so the rebels could not receive any supplies or weapons from Argentina. On the following day, a rebel SVA.5 also attacked the *Adolfo Riquelme* with two bombs which detonated just 30 meters off its hull, causing some damage, and on the afternoon of the same day three SVA.5s strafed all of the vessels, causing some casualties on board. Their last attack was on 11 August with the same results.

It was only a matter of time before both Air Arms would meet for the first dogfights. In the meantime, during a routine flight over Ñu-Guazú, part of the canvas on one of the wings of the government Breguet 14 crewed by Sgt. Cosimo Damiano Rizzotto, completely detached, so the pilot decided to land immediately. Unfortunately, while landing, one of the wings hit a cow and the Breguet flipped over. Although the biplane was a total loss, the pilot survived with only minor injuries and as a consequence of the accident, decided to return to Buenos Aires.

Meanwhile, in the first days of September, the navy patrol craft *Coronel Martinez* carried out an artillery bombardment against the rebel forces in Pacu Cuá, causing several casualties to the enemy.

The Government Air Arm Breguet 14. (*Author's files*)

The Paraguayan Navy Patrol boat *Cnel. Martinez.* (*Victor Meden*)

5 The first dogfights in South America

On 1 September, one rebel SVA.5 carried out a reconnaissance mission over the government troop concentration near Salitre-Cué and dropped bombs without causing any casualties. Coincidently, a government SVA.5 crewed by Lt. Patrick Hasset took off from the Villarrica air field, but when he reached the area, the rebel plane had disappeared. Hasset decided to land in an open field in Salitre-Cué to talk to the commander of the area, who told him about the rebel plane incursion, so he decided to spend the night there. The next morning, army Captain Ramón Ortiz was appointed as the Director of the Military Aviation School. On the 3rd, the same rebel SVA.5 flew over the area again, so Hassett took off to intercept it. He climbed to 1,000 metres and once he saw the enemy plane, he dived towards it and started shooting. The rebel pilot started an evasive manoeuvre and headed to his base in Cangó. Hasset chased him until he ran out of ammunitions and decided to return to his base. According to some reports, the rebel pilot was wounded but he would land his plane safely to fight another day. This is considered the first dogfight not only of this revolution, but also in South America.

On the 4th, another rebel plane, a SVA.10, was flying at 2,000 metres in the area when the alarm was given and Hasset took off in his SVA.5 for an interception. The enemy pilot did not see Hasset approaching since he was looking for government troop concentrations upon which to drop bombs. Hasset climbed to 2,500 metres and dived toward the SVA.10. Once he was within 200 metres of the enemy plane, he started shooting; the gunner was severely injured, and the pilot was wounded in one of his arms. The SVA.10 dived, dropped its bombs, and quickly

Lt. Patrick Hasset, a First World War RFC pilot, posing with a SVA.5. (*Instituto de Historia y Museo Militar del MDN*)

The Government Army 76mm Naval Vickers gun mounted on a train wagon. (*Author's files*)

Lt. Patrick Hasset (left) with Sgt. Antonio Cusmanich on a Government Air Arm SVA.10 at Villarrica Air field. (*Albino Cusmanich*)

headed towards its base. Hasset decided to shoot it down at any cost and continued shooting at it, damaging the SVA.10 engine, which began leaving a trail of black smoke. Without his gunner being able to shoot, the rebel pilot decided to make an emergency landing in an open field between the towns of Ka'i Puente and Cangó. The landing was hard, and the plane was destroyed, although its crew survived.

Hasset returned to his base in Villarrica and reported the dogfight to his superiors. He was congratulated for such an action and he even received a telegram from the Supreme Commander of the Government Army, Brigadier General Manlio Schenoni. Both the rebel pilot and his gunner were rescued by the rebel troops and they were sent to Encarnación to have their wounds taken care of. On the same day, a landing force from the navy ships *Coronel Martinez* and *Rivadavia*

The Government Air Arm SPAD S.XX (*Service Historique de L'Armee de L'Air*)

Left to right: Captain Ramón Ortiz, Sgt. Nicola Bo, Sgt. Antonio Cusmanich and aircraft mechanic Aniceto García. (*Instituto de Historia y Museo Militar del MDN*)

captured some rebel soldiers in Itá-Cuá and later in the landing strip in Isla Alta. On the 6th, another rebel SVA.5 flew over Salitre-Cué, strafing and dropping bombs. Hasset took off to intercept it and both planes engaged in combat. The rebel pilot shot at Hasset's plane but couldn't hit it due to evasive manoeuvres. Hasset was able to place his aircraft in a favourable position to shoot at the enemy, who was injured and broke off the combat, flying to Cangó where he executed a forced landing, damaging the SVA.

A few days later, the gunboat *Coronel Martinez* sank a rebel boat whose crew was carrying 100 kilos of explosives with the intention of destroying the above-mentioned navy gunboat. During the month of September, several landing forces carried out brief incursions to destroy the rail line in the hands of the rebels.

On the 9th, a huge explosion destroyed the bomb depot of the rebel forces in Ka'i Puente due to the mishandling of some of the aviation bombs. As a consequence of the blast, two members of the rebel army, a pharmacist named Antonio Blay and a medical doctor, Elias Mosche, were killed, and some others were severely injured. On the following day, Sgt. Bo in the SPAD S.XX and Lt. Hasset in a SVA.5, bombed the rebel hangar near the town of Carmen del Paraná, destroying it, but fortunately for the insurgents there were no aircraft inside. Both Bo and Hasset used to fly with a rear gunner in the SVA.10 or the SPAD, specifically with army Captain Fernández and also with Sgt. Antonio Cusmanich, a relative of Francisco Cusmanich, who died in the F.K.8 previously mentioned.

Some days later, on the 12th, the Government Air Arm carried out an attack over the rebel army positions near the town of Isla Alta. A SVA.5 crewed by Hasset, and the SPAD S.XX crewed by Bo, were responsible for the mission. While the SVA.5 dropped bombs on the troop concentration, the SPAD strafed the rebels, causing many casualties. A few days later, Isla Alta fell into the hands of the government troops.

In the very early morning of the 16th, a pair of rebel SVA.5s bombed

Left to right: Lt. Patrick Hasset, Lt. Francesco Montanaro, Captain Carlo de Paoli, Lt. Sardi and Sgt. Nicola Bo, all Government Air Arm pilots, posing with a SVA.5. (*Author's files*)

the government troops in the towns of Cangó and Isla Alta, causing some casualties. The rebel planes wanted to neutralize the government army artillery in the area but were not able to find them. In fact, a 76 mm naval Vickers gun battery had been mounted on a train wagon and taken to Isla Alta to be used against the rebels.

On the 22nd, both the SPAD S.XX and a SVA.5 strafed a rebel train between the towns of Carmen del Paraná and Ka'i Puente, causing some casualties and damaging the locomotive.

At dawn on the 25th, a government locomotive pulling the above-mentioned naval gun battery started rolling along the tracks to call the attention of the enemy aviation, as part of a well-prepared trap. The day before, a couple of SVA.5s and the SPAD S.XX landed in Isla Alta and were hidden with tree branches. The idea was to intercept the rebel planes as soon as they appeared in the area. At 6 am, the first enemy SVA flew over the area and detected the government train. Meanwhile, Sgt. Bo took off in the SPAD S.XX and climbed to 1,000 metres and once he had located the rebel SVA, he dived towards it, shooting fiercely before the rebel pilot could drop the bombs on the train. The enemy pilot tried to escape but Sgt. Bo fired from a distance of 30 meters, hitting both the pilot, who was injured, and the engine. The rebel SVA dived and flew away towards its base, leaving a trail of black smoke. Bo chased him but ran out of ammunition and had to return to Isla Alta. The other two government aircraft were on alert, but did not take off.

The rebel pilots learned the lesson very well and from then on, they took off only when their government counterparts returned to their bases for more fuel and ammunition. Then they dared to drop some bombs on the government troop concentration and quickly return to their base.

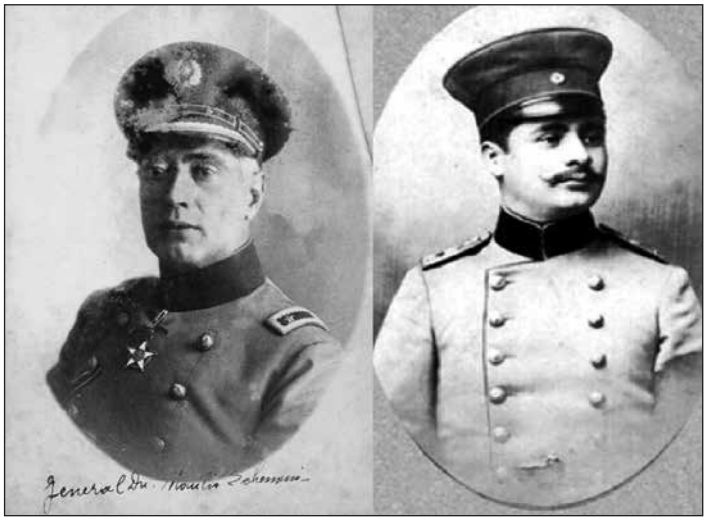
On 7 October, a rebel SVA.5 dropped bombs on the Navy gunboat *Adolfo Riquelme* in the Paraná River causing some damage. Some days later, on the 15th, the recently promoted Captain Patrick Hasset, flying the SPAD S.XX with Navy 1st Lt. Fortunato Arias as the gunner, carried out an attack mission, using bombs, against a rebel train. The train was supposed to carry rebel troops and artillery pieces to Carmen del Paraná and was still at the Ka'i Puente station when the SPAD initiated the attack. The infantry troops, who had not boarded the train yet, ran away for protection in a nearby forest and both bombs made a direct impact, destroying two wagons completely and damaging the locomotive.

Due to the desperate situation of the rebel troops, their last two pilots decided to desert, flying a couple of SVA.5s to the city of Ituzaingó, Argentina on 28th October, leaving the last SVA.10 behind, since there were no more pilots to fly it away.

6 The last air raids

In November, one of the rebel commanders, Col. Adolfo Chirife, concentrated 1,200 troops, all his artillery pieces and heavy machine guns along a 9,500-metre trench in Ka'i Puente. The rebels also prepared several mine fields and barbed wire in front of their trenches, expecting a huge attack from the government forces. On the opposite side, there were 3,000 soldiers and 12 pieces of artillery, including a huge 190mm Vickers cannon affectionately called *El Abuelo* (The Grandfather), mounted on a railway wagon. Meanwhile, all the available aircraft were flown in reconnaissance missions to collect information about the rebel army deployment.

The then Major José Félix Estigarribia (who was going to be the Commander-in-Chief of the Paraguayan Army during the Chaco War ten years later) led a 1,500-man column through the right flank of the rebel troops in Ka'i Puente and, with a surprise attack, captured the city of Carmen del Paraná. This capture was tactically important because it cut the supply line of the rebel forces. The rebel garrison in Encarnación, led by Lt.Col. Brizuela, sent 700 soldiers to recapture Carmen del Paraná, but found fierce opposition and had to withdraw from the area. Meanwhile, the government troops led by Major Julián Sánchez, supported by the aviation, assaulted the trenches in Ka'i Puente, causing heavy casualties to the enemy. The battle ended near 9 pm with the total defeat of the rebel forces. Large numbers of troops were captured, but the leaders of the revolt, Colonels Chirife and Mendoza, together with some officers and around 500 soldiers carrying only three heavy machine guns, escaped through the forest. The garrison in Encarnación was also evacuated by the rebels. The war booty for the government army included hundreds of rifles and guns, several pieces of artillery, some heavy machine guns, ammunition and even the rebels' last SVA.10, which was no longer in flying condition. The biplane was dismantled and taken to Ñu-Guazú base by train. It was eventually repaired by the mechanics and officially incorporated into the Government Air Arm on 20th December 1922.



Brigadier General Manlio Schenoni Lugo (left), Commander-in-Chief of the Government Army. Major José Félix Estigarribia (right). (*Academia Liberal de la Historia*)

After the above-mentioned battle, the decimated rebel forces started guerrilla incursions in small towns and basically moved to the north of the country, in the Canindeyú and Amambay areas, establishing their headquarters in the town of Bella Vista Norte.

In the second half of December, Captain Patrick Hasset returned to Argentina. The civil war had not ended, and the government decided to send troops to the north, together with a pair of SVA.5s crewed by Sgt. Nicola Bo and Captain Carlo de Paoli, establishing a temporary air base in the city of Concepción. From there, they flew some reconnaissance and bombing missions against the insurgents.

7 The official foundation of the Military Aviation School

Due to the importance of the aerial operations during the revolution, the government finally decided to officially found the Military Aviation School, through the Decree Nr. 15.787 dated 22 February 1923. Sgt. Nicola Bo was appointed as the new director of the school, being promoted to the rank of First Lieutenant *Honoris Causa*, and both aircraft mechanics, Giusseppe Barbenza and Giusseppe Bo were hired to be in charge of maintenance. The first fleet of the school was composed of one Ansaldo SVA.10, which received the serial Nr. 1, one Ansaldo SVA.5, with serial Nr. 2, two SAML A.3, with the serials M.E.T 1 and M.E.T 2, and the SPAD S.XX which did not receive any serial. The rest of the biplanes were not in flying condition and were used as a source of spare parts.

Unfortunately, pilot training was not carried out on a regular basis due to the lack of a formal syllabus, reliable trainers and of course, good flight instructors. So, for the next three years, neither pilots nor aircraft mechanics were formed in the Military Aviation School until the French Military Mission arrived in 1926.

The Military Aviation School at Ñu-Guazú Air Base near Asunción in 1923. (*Instituto de Historia y Museo Militar del MDN*)

8 The end of the conflict

In spite of massive desertions, the disintegration of their army in the northeast, and the loss of their air arm, the rebels were still an active force as they occupied Villarica, which was now virtually undefended, on 18th March 1923. This was the beginning of a surprise new offensive; the rebels having regrouped yet again in the Cordillera de Amambay during the previous three months.

They began to advance towards the capital again and intercepted and destroyed a Government supply convoy of 20 wagons, protected by 500 troops with two pieces of artillery, under the command of Captain Juan B. Ayala, as it forded a stream near the village of Unión, en route

from San Pedro to Carayaó, where the bulk of the Loyalist forces were now encamped. The survivors were saved from complete annihilation only by the arrival of elements of Estigarribia's *Destacamento II*.

President Dr. Eusebio Ayala resigned due to ill health on 9th April 1923, being replaced by his Finance Minister Dr. Eligio Ayala. Meanwhile, the rebels suffered a series of reverses and retreated to the town of Yhú, where they established their headquarters. One of the rebel leaders, Colonel Adolfo Chirife, fell ill with pneumonia, and died at Itakyry, near Hernandarias, on 18th May while being taken to Posadas, Argentina, for medical treatment. Command of the Rebel forces was then assumed by Colonel Pedro Mendoza as they started marching towards Asunción in a desperate attempt to occupy the capital.

Although much diminished in numbers, the rest of the Constitutional Army, having lost contact with their adversaries at Molinas Cué, continued to advance on the capital. They moved through heavily wooded country which enabled them to avoid contact with the Loyalist forces, troops of the opposing armies often passing within 50 metres without being aware of each other's presence, and advanced somewhat circuitously through Carapeguá, Itá and San Lorenzo towards Asunción.

Whilst the bulk of the Loyalist forces, taken in by a ruse which made it appear that the rebels were still concentrated in the vicinity of Carayaó, engaged in a futile pursuit northwards of an enemy force which had in fact managed to outflank them and advance southwards, the virtually undefended capital was abandoned by the government who fled northwards by river, carrying the contents of the national treasury with them.

The insurgents, led by Lieutenant Colonel Brizuela, advanced against only limited resistance, mainly from the police force in the capital, reaching the centre of the city by the evening of 9 July. The rebels took the Ñu-Guazú air base and captured three aircraft in flying condition, but since they did not have anybody to fly them, they were useless. The following day, with victory apparently in their grasp, the insurgents were undermined by their old nemesis, defective logistic support, and ran out of ammunition and had to retreat in the face of a resolute counter-attack; coincidentally as the Loyalist forces from the north arrived at the outskirts of Asunción, taking them in the rear. Rebel morale, always fragile, now collapsed completely, and with it the uprising. Colonel Brizuela led what it was left of the insurgent army to Villeta where they threw away their weapons before crossing the river to exile in Argentina.

9 Conclusions

In addition to the aircraft already mentioned, both sides looked for additional arms and equipment during the conflict. The Loyalists purchased 2,500 Mauser rifles and 12 Maxim machine-guns from Chile, while the insurgents got a further 1,500 Mausers from various sources. Only 4,091 Mauser rifles and carbines of assorted models and calibres, 26 assorted machine-guns and 17 pieces of artillery survived at the end of hostilities.

Even though the rebels had the support of almost 90% of the Army and possessed almost all the pieces of artillery available, their combat performance was a failure. Their weak points were obviously logistics and medical services. They also relied on just one port, Encarnación, as a source of external supplies, and once it was conquered by the Government forces, the rebels could not receive any further supply. The military leadership of the rebels was also very faulty, especially Chirife, with continuous retreats. On the other side, the most competent officers remained loyal to the government, with the advantage of possessing the national arsenal that could equip 5,000 effectives in a short time. The government could also count on the Navy, and an Air Arm whose pilots were more experienced.

Most clashes and battles between the Loyalists and rebels took place along the Asunción-Encarnación railway line, and the subsequent manoeuvring of the opposing armies, often in close proximity, without making contact or even being aware of each other's presence, only calls into perspective in the context of a heavily-wooded and under-populated country.

The great irony was the fact that the rebels ran out of ammunition as final victory was within their grasp. The conflict was indeed as bloody and divisive as any civil war and it almost destroyed the economy of a country which had not yet recovered from the disastrous Triple Alliance War (1864-1870, against Brazil, Argentina and Uruguay), half a century earlier. It did however serve as a training ground for most of the leaders of the Chaco War, which broke out a decade later.

10 The Paraguayan Military Aviation aircraft in 1922

A. The Government Air Arm

Aircraft	mc/n	Serial	Remarks
Armstrong Whitworth F.K.8	?	No serial	Purchased in 06.22 and christened Pte. Ayala. Shot down by AA fire on 08.07.22 in Pirayú.
Breguet 14 A.2	?	No serial	Purchased in 07.22. W/O at Ñu-Guazú AFB on 25.08.22.
SPAD-Herbemont S.XX	?	No serial	Purchased in 07.22. WFU in mid-1923.
Ansaldo SVA.5	?	No serial	Purchased in 07.22. WFU in 1923.
Ansaldo SVA.5	?	2	Purchased in 07.22. WFU in 1932.
Ansaldo SVA.10	?	1	Purchased in 07.22. WFU in 1932.
SAML A.3	?	MET-1	Purchased in 07.22. WFU in 1935.
SAML A.3	?	MET-2	Purchased in 07.22. W/O in Borda Loma in 1929.

B. The Revolutionary Air Arm

Aircraft	mc/n	Serial	Remarks
Ansaldo SVA.5	?	No serial	Purchased in 07.22. DBR in Cangó on 06.09.22.
Ansaldo SVA.5	?	No serial	Purchased in 07.22. Defected to Argentina on 28.10.22
Ansaldo SVA.5	?	No serial	Purchased in 07.22. Defected to Argentina on 28.10.22
Ansaldo SVA.10	?	No serial	Purchased in 07.22. DBR in 07.22. Captured by government and used as a source of spare parts.
Ansaldo SVA.10	?	No serial	Purchased in 07.22. Shot down in Ka'i Puente on 04.09.22.
Ansaldo SVA.10	?	No serial	Purchased in 07.22. Damaged after landing. Captured by government in 12.22 and used for spare parts.

PART TWO: Aerial Operations in the Revolution of 1947

1 Post Chaco War aircraft acquisition in Italy

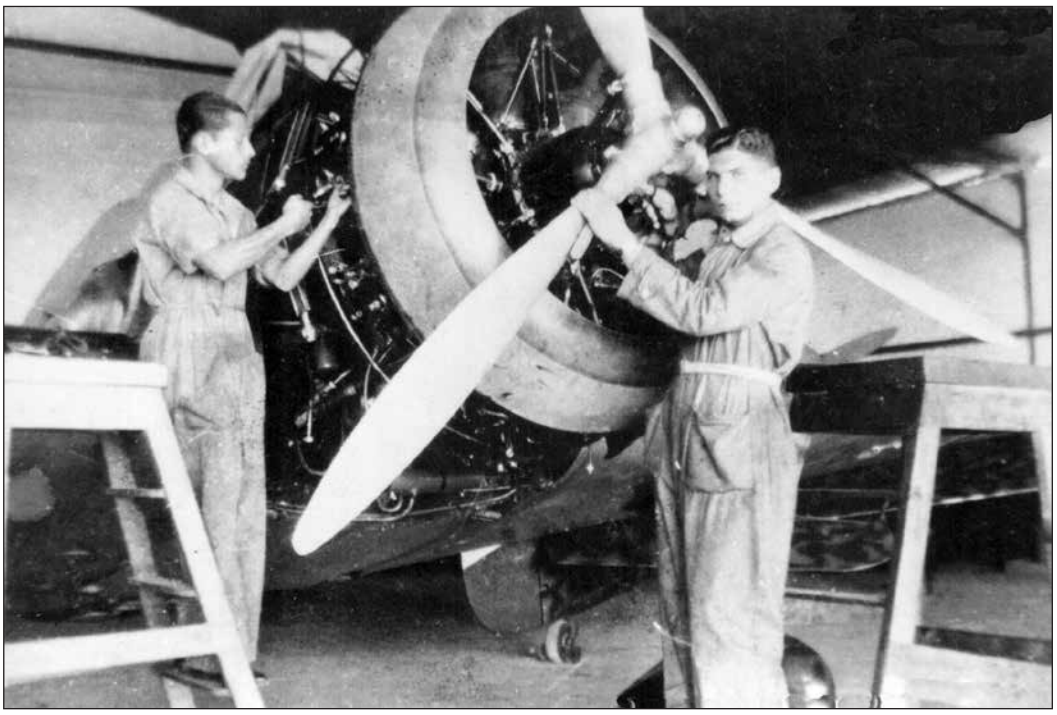
Just eight months after the end of the Chaco War, a *Coup d'Etat* led by a number of high-ranking Army officers overthrew President Dr. Eusebio Ayala and his Liberal government and took over power in Paraguay. The Presidency was offered to the Chaco War veteran, Colonel Rafael Franco and during his administration, a modernization process of the whole armed forces was initiated, including, of course, the Military Air Arm. Some months later, with the advice of two Italian pilots who lived in Paraguay, Nicola Bo – a WWI and Chaco War veteran – and Antonio Costagliola – flight instructor of the Paraguayan Naval Aviation, the government got in touch with the Italian Consortium CIMA *(Consorcio Italiano de Materiale Aeronautiche)* to order the purchase of some Fiat and Breda aircraft and also talked to the *Caproni Aeronautica Bergamascha* representative for Latin America, Guglielmo Francini.

The deal was set for 60 aircraft including 21 Caproni AP-1 dive and assault bombers, 5 Caproni AP-1 Idro hydroplanes, and 3 Caproni Ca.309 Ghibli for transport for the total amount of US$ 1,321,100. On the other hand, another contract was signed with CIMA to provide 20 Fiat C.R.32quater fighters, 4 Fiat C.R.30B advanced trainers, 4 Breda Ba.25 basic trainers and 3 Breda Ba.25Idro hydroplanes for a total amount of US$ 869,111. The total deal was exactly US$ 2,207,064, a real fortune at that time, and taking into account that the nation's finances were almost ruined after the war.

Another military coup overthrew Franco, and the Liberal Party returned to government. Dr. Felix Paiva, a well-respected intellectual who had been the Vice President of the country in the early 1920s, a senator, a judge in the Supreme Court and a university professor, was asked to be the new President. Paiva decided to cancel the order for the 60 planes, but the Italians finally convinced him to at least accept one-third of them. So, 20 aircraft, including 7 Caproni AP-1, 5 Fiat C.R.32quater, 2 Fiat C.R.30B, 2 Caproni Ca.309 Ghibli and 3 Breda Ba.25 were accepted for the Air Arm, and just a single Breda

Pilot Cadet Pedro Cataldo posing with a Breda Ba.25 basic trainer in 1939 at Ñu-Guazú Air Base. (*Pedro Cataldo*)

Some elementary school students proudly standing by a Paraguayan Air Arm Caproni Ca.309 Ghibli at Ñu-Guazú Air Base in 1940. (*Col. MAM Agustin Pasmor*)

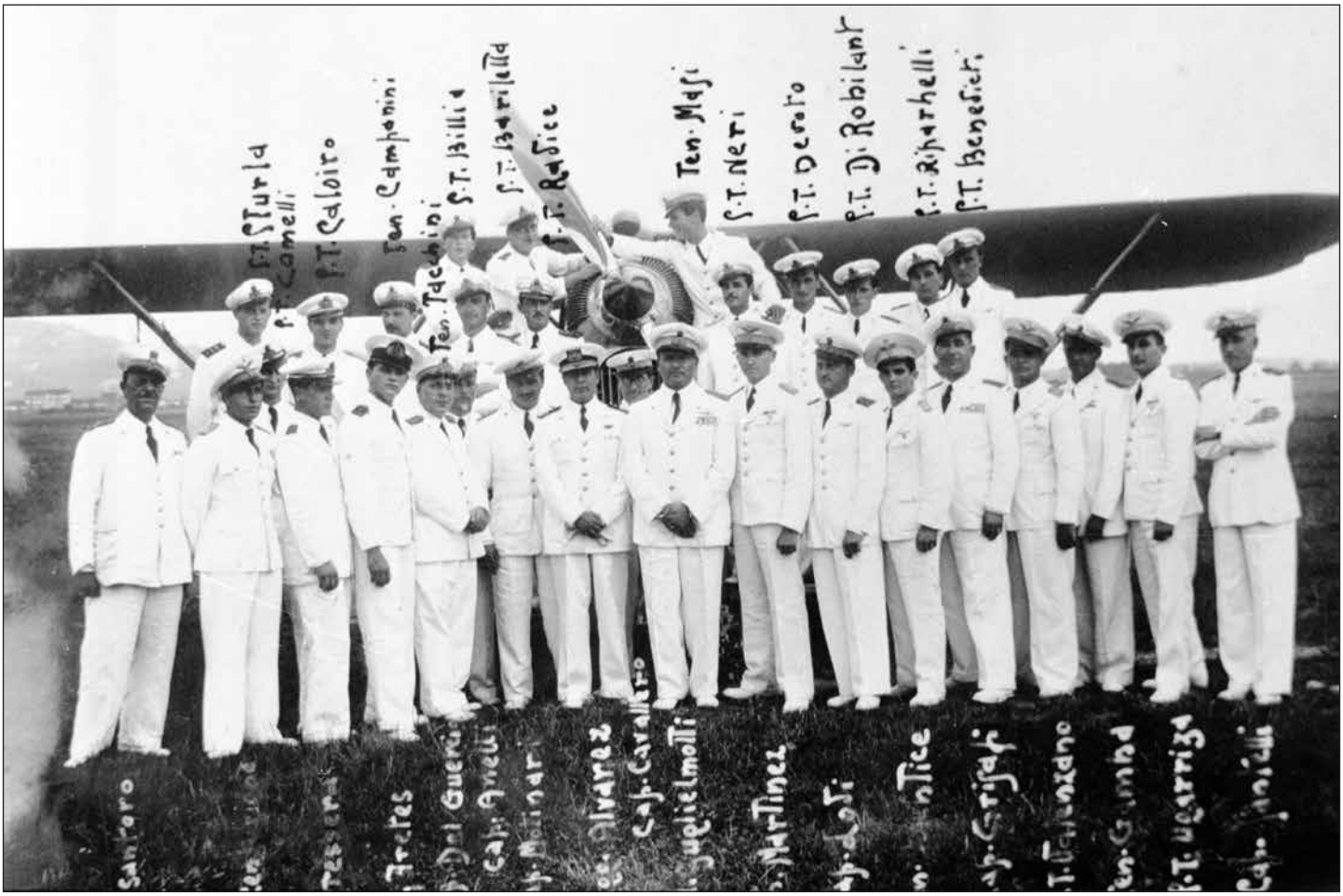


NCO MAM Pablino Vera (right) and an assistant inspecting a newly acquired Caproni-Bergamaschi AP-1 at Ñu-Guazú Air Base in 1940. (*Pablino Vera*)

Ba.25 Idro for the tiny Naval Aviation. These planes finally arrived in Paraguay in the first months of 1939, being assembled by the maintenance personnel with the aid of the members of an Italian Mission to Paraguay sent by Caproni, and a Military Mission led by Capitano RA (Captain) Virginio Teucci and four aircraft mechanics.

With the arrival of the Italian aircraft, a huge reorganization was carried out in the Paraguayan Air Arm, as follows:

- *Escuadrón de Entrenamiento* (Training Squadron), with 3



Paraguayan and Italian pilots for an official picture at Mirafiori Air Base in Torino, 1938. (*Roberto Gentilli*)

Consolidated Fleet Model 2, 1 Consolidated Model 21 (PT-11), 3 Breda Ba.25 and 2 Fiat C.R.30B.
- *Primer Escuadrón de Caza* (1st Fighter Squadron), with 2 Fiat C.R.20bis and 5 Fiat C.R.32quater.
- *Segundo Escuadrón de Caza* (2nd Fighter Squadron), also known as *As de Bastos* (Ace of Clubs), with 7 Caproni AP-1.
- *Escuadrón de Reconocimiento y Bombardeo* (Reconnaissance and Bombing Squadron), with 6 surviving bombers from the Chaco War, 5 Potez 25TOE and 1 Potez 25 A.2.
- *Escuadrón de Transporte* (Transport Squadron), with 2 Travel Air S6000B, 1 Breda Ba.44 and 2 Caproni Ca.309 Ghibli.

2 Paraguayan Military Aviation Mission to Italy

During the acquisition negotiations for the Italian aircraft, the government decided to send some Army and Navy officers and NCOs to Italy for training. The first group was composed of four pilot officers and seven technical NCOs. They travelled in October 1937. First, they visited several *Regia Aeronautica* air bases, aircraft factories and museums and they were even received by the Duce Benito Mussolini and the Pope Pius XI. The pilots were trained in the *3° Stormo da Caccia* (3rd Fighter Squadron) at the Mirafiori Air Base near Torino, while the NCOs received training in the Breda factory in Milano, Caproni in Bergamo and Taliedo, and Fiat in Torino.

A second group, composed of just 5 pilots, travelled to Italy in January 1938. Both groups returned to Paraguay in November of that year.

3 Lend-Lease Programme aircraft for Paraguay

Seven freshly assembled lend-Lease Fairchild PT-19s lined up at Ñu-Guazú Air Base in 1943, right after delivery to the Paraguayan Air Arm. (*Instituto de Historia y Museo Militar del MDN*)

Paraguayan Air Arm mechanics receiving technical training from the USAAF Mission members at Ñu-Guazú Air Base in 1943. (*Daniel P. Hagedorn*)

Once the Second World War broke out in Europe, the U.S. government developed what was called the Lend-Lease Programme, not only to help the allies fighting the Axis but also many Latin American countries, including Paraguay. From 1942 to 1945, the Paraguayan Air Arm received 18 Fairchild PT-19A-FA primary trainers, 10 Vultee BT-13A basic trainers, 3 North American AT-6C Texan advanced trainers and 2 Beechcraft UC-45F transports, and the Naval Aviation just 2 Naval Aircraft Factory N3N-3 hydroplanes. Ten

Paraguayan Air Arm pilots and aircraft mechanics at Ñu-Guazú Air Base in 1943. On the left, in the back row, Captain Van Hynnes of the USAAF Mission to Paraguay can be seen. (*Instituto de Historia y Museo Militar del MDN*)

Major PAM Pablo Stagni, Commander of the Paraguayan Air Arm (third from the left), officially receiving the first batch of Lend-Lease Vultee BT-13s in January 1943. (*Instituto de Historia y Museo Militar del MDN*)

Boeing-Stearman PT-17 trainers were also in the list to be delivered to Paraguay, but they were not sent.

Under the American Republics Project (ARP), the Paraguayan Air Arm should have received 15 Republic P-47N-20 Thunderbolt fighters, 8 N.A. B-25 Mitchell medium bombers, a single Douglas C-47 and 3 Beechcraft AT-11 Kansan in late 1945, but due to the political instability in the country, they were not delivered. Paraguay was again on the ARP delivery list for 12 used P-47D fighters in October 1947, but they were not delivered either.

Due to the war, it was almost impossible to get spare parts for the Italian aircraft, and to keep some of them in flying condition the Air Arm had to cannibalize some others. Unfortunately, with the arrival of the Lend-Lease aircraft, and due to the lack of hangars, most of the Chaco War veteran aircraft were withdrawn from service. By the mid-1940s, only a few Caproni AP-1s and the two Ca.309 Ghiblis were still in service, all the rest being grounded due to technical problems.

Some of the American aircraft remained in their wooden crates for many months due to the lack of space in the hangars. Two additional hangars were added, totalling four, but more were urgently needed, so four more were quickly built at Ñu-Guazú Air Base. A USAAF Military Mission was assigned to Paraguay and it was composed of Major James Finnegan, Captain Van Hynnes and a Sergeant whose name was not recorded. They stayed in Paraguay until March 1945.

4 Paraguayan Military Aviation Missions to Brazil

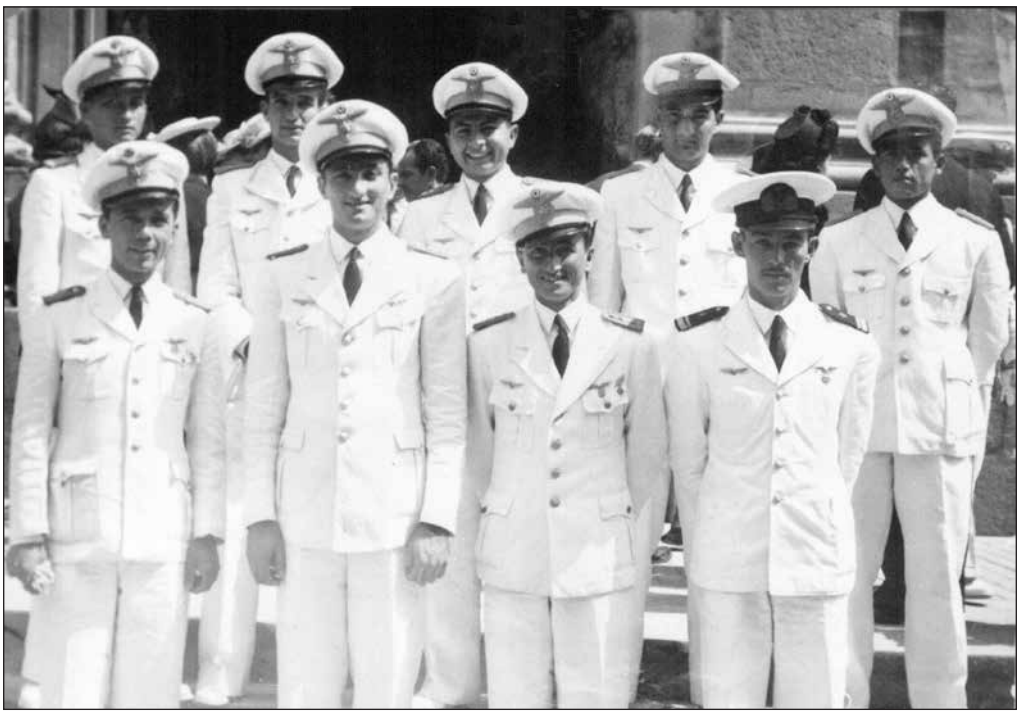
Since the Brazilian Air Force was using the same kind of trainers, some Paraguayan Air Arm pilots were sent to the *Escola de Aviação Militar de Campo dos Afonsos* (Military Aviation School at Campo dos Afonsos) in Rio de Janeiro for training. Between 1942 and 1944, a total of 17 Paraguayan pilot officers and 7 technical NCOs were trained in Brazil. The first mission was composed of five pilot officers, 2nd Lt. PAM Nicolas Aparicio, Atilio M. Campos, Angel E. Doldán, Juan Duarte and Cirilo Caceres Carísimo, who received their pilot wings on 27th December 1943. Two other pilots, 2nd Lt. PAM Julio de Filippis and Pilot Cadet Eduardo Schusmüller, who were sent later, died in air crashes in Brazil. In 1942, the technical NCOs MAM Fidelino Serrati, Enrique Coeffier, Eladio Rodriguez, José Ferreira, Juan Pablo Benitez, Nestor Vera y Aragón, and Arnulfo Cubilla started their training in Brazil.

A second mission, composed of 10 pilots including 1st Lt. PAM José Duarte, Pedro Cataldo, Epifanio Ovando, Eladio Velazquez, Ismael Florentin and Félix Zárate Monges, Lt.Commander PAN Pedro Oviedo (Naval Aviation) and Sub.Lt.PAM Horacio Acosta, Abraham Giubi and Eladio Zárate travelled to Brazil in April 1942. They first received training on PT-19s and BT-15s, but later transferred to the Lockheed A.28 Hudson, Vultee A.31/A.35 Vengeance and Consolidated Vultee PBY-5 Catalina. They also received training on other types, such as the N.A. AT-6C, Focke Wulf Fw44 and Fw58, Grumman J4F2 Widgeon and Boeing-Stearman 76. By 26 August 1943, the Paraguayan pilots had flown almost 250 hours of instruction when the training programme successfully ended.

Five Paraguayan Air Arm pilots receiving training in the Brazilian Air Force Military Aviation School at Campo dos Afonsos in Rio de Janeiro in 1943. (*Instituto de Historia y Museo Militar del MDN*)

Five Paraguayan military pilots together with the Brazilian Air Force Col. Fontenelle at the Military Aviation School at Campo dos Afonsos, in Rio de Janeiro in 1942. (*Pedro Cataldo*)

5 Paraguayan pilots flying war missions during the South Atlantic Campaign in WWII



Nine out of the ten Paraguayan military pilots who participated in the South Atlantic Campaign with the Brazilian Air Force in 1944. (*Pedro Cataldo*)

After several attacks on merchant vessels just off of the Brazilian coast by the German submarine *U-507*, Brazil entered WWII on 22nd August 1942. The first attack carried out by the *Força Aérea Brasileira* (Brazilian Air Force) was against the Italian Navy submarine *Bargarigo* on 22nd May 1942, although unsuccessful. The Brazilian Navy had some modern minelayers for coastal convoy escort and the Air Force had aircraft capable of maritime patrol and attack. As a consequence of the Axis submarines' attacks, Brazil lost three warships with 486 casualties and 32 merchant ships with 972 victims amongst seamen and civilians. The U.S. and Brazilian Navies and Air Forces started joint operations in the South Atlantic and in July 1943 they would sink the German submarine *U-199*. Between January and September 1943 another ten German *U-boote* and a single Italian submarine were sunk in Brazilian waters.

In October 1943, the group of 10 Paraguayan pilots was transferred to the Galeão Air Base in Rio de Janeiro. The Brazilian Government requested its Paraguayan counterpart special permission so as to include those pilots as members of the operational crews in the South Atlantic campaign against Axis submarines.

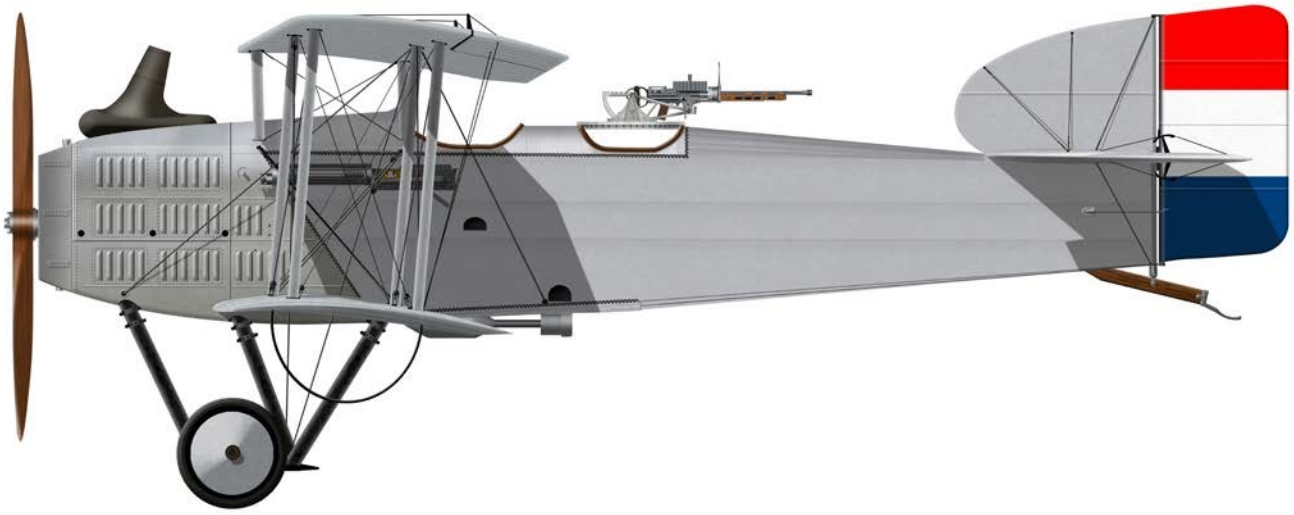
Such permission was granted even though Paraguay had not yet declared the war on the Axis. Those pilots, who belonged to the second mission previously mentioned, flew as co-pilots, navigators, gunners or just observers from October 1943 to October 1944, totalling almost 500 hours in 630 patrol missions in the Rio de Janeiro – Vitoria area. During the first three months, they crewed N.A. AT-6C, Grumman J4F2 and Focke Wulf Fw58 Weihe aircraft, but then they were transferred to Lockheed A.28 Hudson and Consolidated-Vultee PBY5 Catalina for longer patrol missions over the Atlantic.

FAB aircraft flown by Paraguayan pilots in 1943-44 in the South Atlantic Campaign. From top to bottom: Lockheed A.28 Hudson, Vultee A.31 Vengeance and Consolidated-Vultee PBY-5A Catalina. (José de Alvarenga)

Part One: Aircraft Profiles

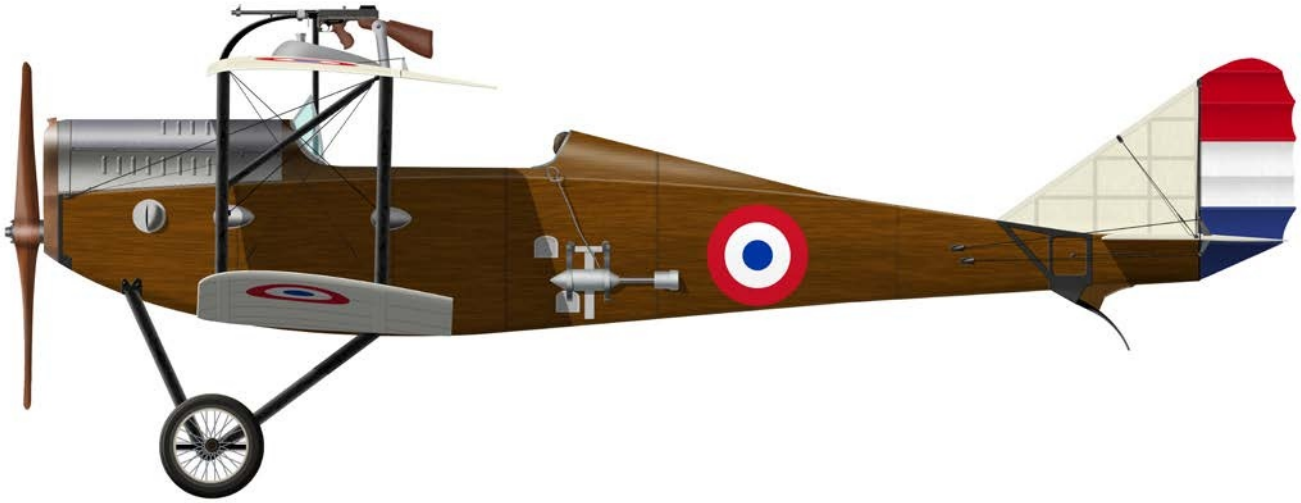
A. Government Air Arm

One Armstrong Whitworth F.K.8 was in service in the Government Air Arm. It had a fixed .303 Vickers machine gun for the pilot and a movable Lewis one for the gunner, and could carry 100 kilos of bombs in racks under the lower wing. Paraguayan roundels were applied on top surfaces of the upper, and bottom surfaces of the lower wing, and national colours on the rudder. It was shot down by ground fire on 8 July 1922, near the town of Pirayú. (Artwork by J.P. Vieira)

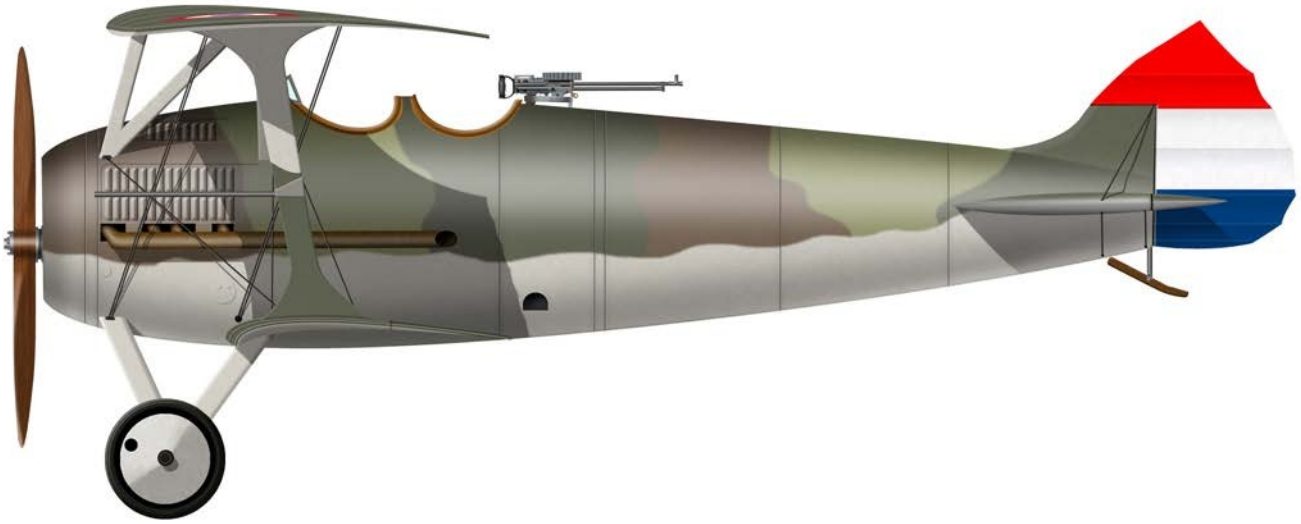


One Breguet 14A.2 was in service in the Government Air Arm. It had a fixed .303 Vickers machine gun for the pilot and a movable Lewis one for the gunner and could carry 300 kilos of bombs in racks under the lower wing and under the fuselage. The Paraguayan roundel was painted in the four wing positions and the colors of the flag in the rudder. It was destroyed in an emergency landing at Ñu-Guazú AFB in August 1922. (Artwork by J.P. Vieira)

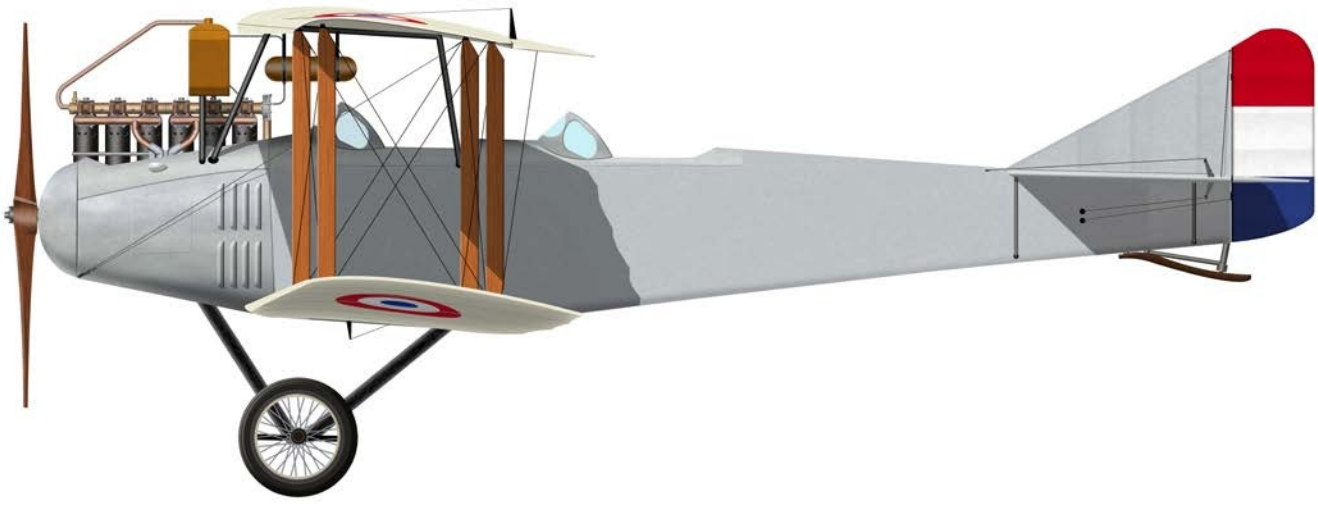
Two Ansaldo S.V.A.5 saw service in the Government Air Arm. They participated in dogfights and light bombing, and strafing missions against the rebels. They both had a single fixed .303 Vickers machine gun for the pilot and could carry up to 100 kilos of bombs in racks on the side of the fuselage. The Paraguayan roundel was painted in the four wing positions and also in the fuselage right after the bomb racks, and the colors of the flag in the rudder. (Artwork by J.P. Vieira)



Only one Ansaldo SVA 10 saw service in the Government Air Arm. It participated in several recce, strafing and light bombing missions throughout the conflict. It had a Thompson SMG mounted on top of the high wing for frontal fire and the gunner just carried another Thompson SMG for ground fire. It also had a couple of racks on the sides of the fuselage and could carry up to 100 kilos of bombs. The Paraguayan roundel was painted in the four wing positions and the colors of the flag in the rudder. (Artwork by J.P. Vieira)



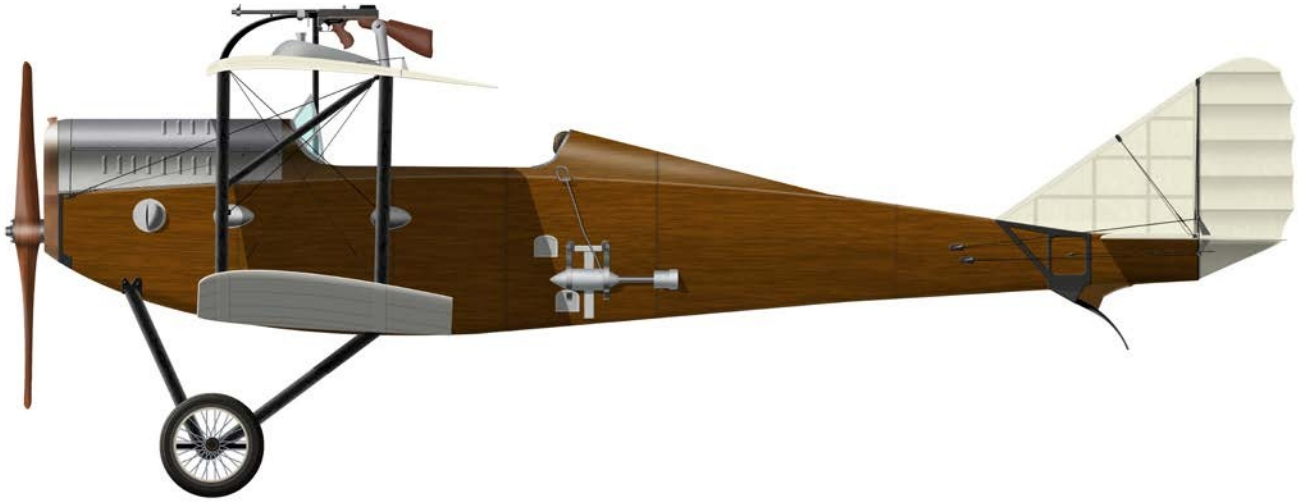
One SPAD S.XX fighter was incorporated to the Government Air Arm. It was mainly flown by Sgt. Nicola Bo. It had a couple of fixed 7.7 mm Vickers MG for frontal fire and a movable Lewis MG for the gunner. The Paraguayan roundel was painted in the four wing positions and the colors of the flag in the rudder. (Artwork by J.P. Vieira)



Two SAML A.3 were purchased by the Government Air Arm. They were mainly used for recce missions but they eventually carried a gunner with a SMG for strafing missions. They both survived the conflict to be used as trainers in the Military Aviation School in 1923. The Paraguayan roundel was painted in the four wing positions and the colors of the flag in the rudder. (Artwork by J.P. Vieira)

B. Revolutionary Air Arm

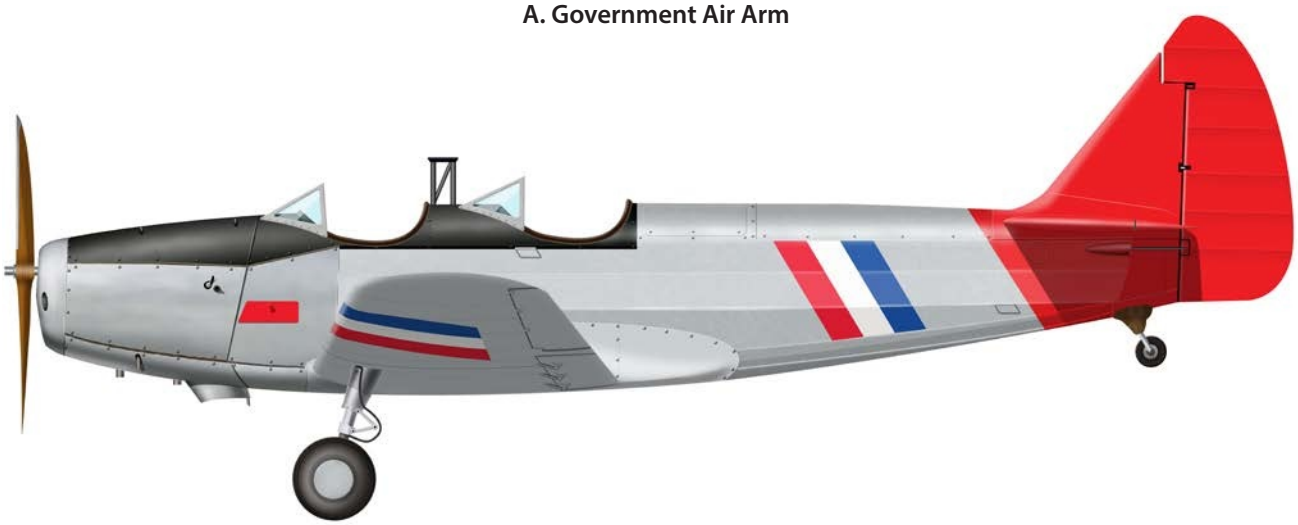
Three Ansaldo SVA 5 saw service in the Revolutionary Air Arm. They participated in dogfights and light bombing, and strafing missions against the government. They both had a single fixed .303 Vickers machine gun for the pilot and could carry up to 100 kilos of bombs in racks on the side of the fuselage. They did not have any identification markings. One was damaged beyond repairs after a dogfight with a similar government plane on 6th September 1922 and the other two SVA 5s defected to Argentina on 28th October 1922. (Artwork by J.P. Vieira)



Three Ansaldo SVA 10 were purchased by the Revolutionary Air Arm. They participated in several recce, strafing and light bombing missions throughout the conflict. They had a Thompson SMG mounted on top of the high wing for frontal fire and the gunner just carried another Thompson SMG for ground fire. They also had a couple of racks on the sides of the fuselage and could carry up to 100 kilos of bombs. Two of them was damaged beyond repairs after a forced landing in July 1922 and the third one was shot down in a dogfight near Ka'i Puente on 4th September 1922. They did not have any identification markings. (Artwork by J.P. Vieira)

Part Two: Aircraft Profiles

A. Government Air Arm



Five Fairchild PT-19A saw service in the Government Air Arm for recce and light bombing missions. The second crew member carried mortar ammunition that was thrown by hand or a light SMG for troop strafing. Diagonal red-white-blue stripes were painted in the four wing positions and on the fuselage and the empennage was painted in red for identification. (Artwork by J.P. Vieira)

Four Vultee BT-13A were in service in the Government Air Arm for recce and light bombing missions. Some of them were locally modified to carry up to 50 kilos of bombs in a single bomb rack under the fuselage. The rear crew member carried a light SMG for troop strafing or mortar ammunition that was thrown by hand. They had the same color scheme as the PT-19s. (Artwork by J.P. Vieira)

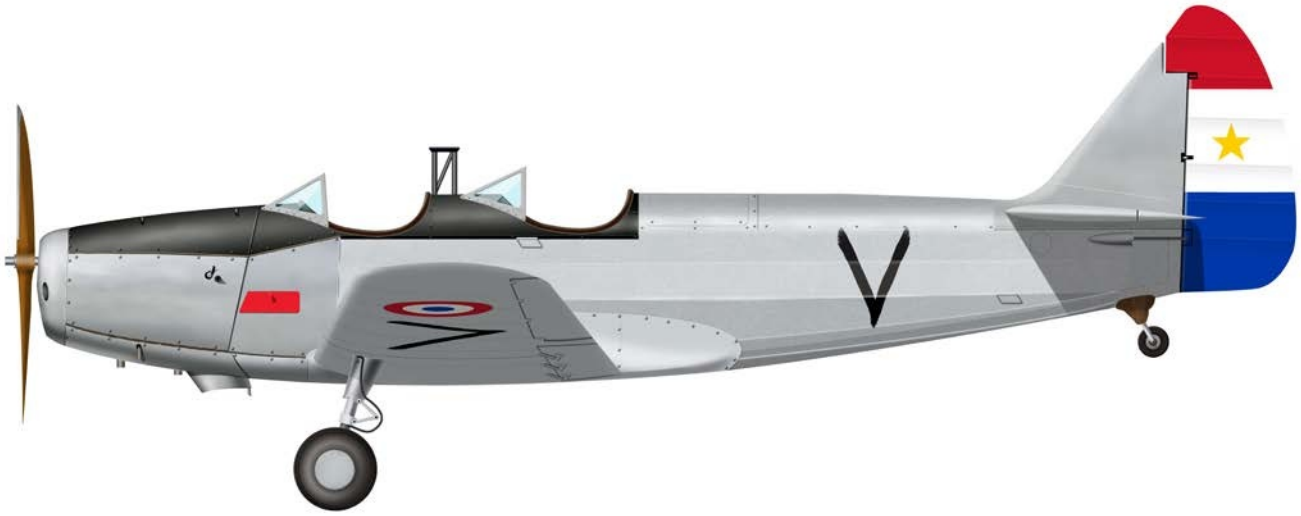
Two armed N.A. AT-6Cs saw service in the Government Air Arm. They were painted as the PT-19s and BT-13s for identification. They had two fixed 7.62mm machine guns, one under the engine cowling and the second on the right wing and a movable 7.62 Colt MG in the rear cockpit. They also had four hard points to carry bombs under the wings. The bombs used were the locally manufactured 15k. ones. A third AT-6C defected to the Revolutionaries. (Artwork by J.P.Vieira)

One Beechcraft UC-45F Expeditor was used by the Government Air Arm for transport duties. It did not received the markings used in the PT-19s, BT-13s and AT-6Cs. It just kept the Paraguayan roundel in the four wing positions and the flag colors in the rudder with a yellow star in the white stripe. The serial was painted in black in the fuselage. Another sample defected to the Revolutionaries. (Artwork by J.P. Vieira)

One Avro Anson Mk.V was purchased in the civil market in Argentina. It kept the overall metal finish with the Paraguayan roundel in the four wing positions and the flag colors in the rudder with the yellow star. The serial was painted in black in the fuselage. It was used as a VIP transport. (Artwork by J.P. Vieira)

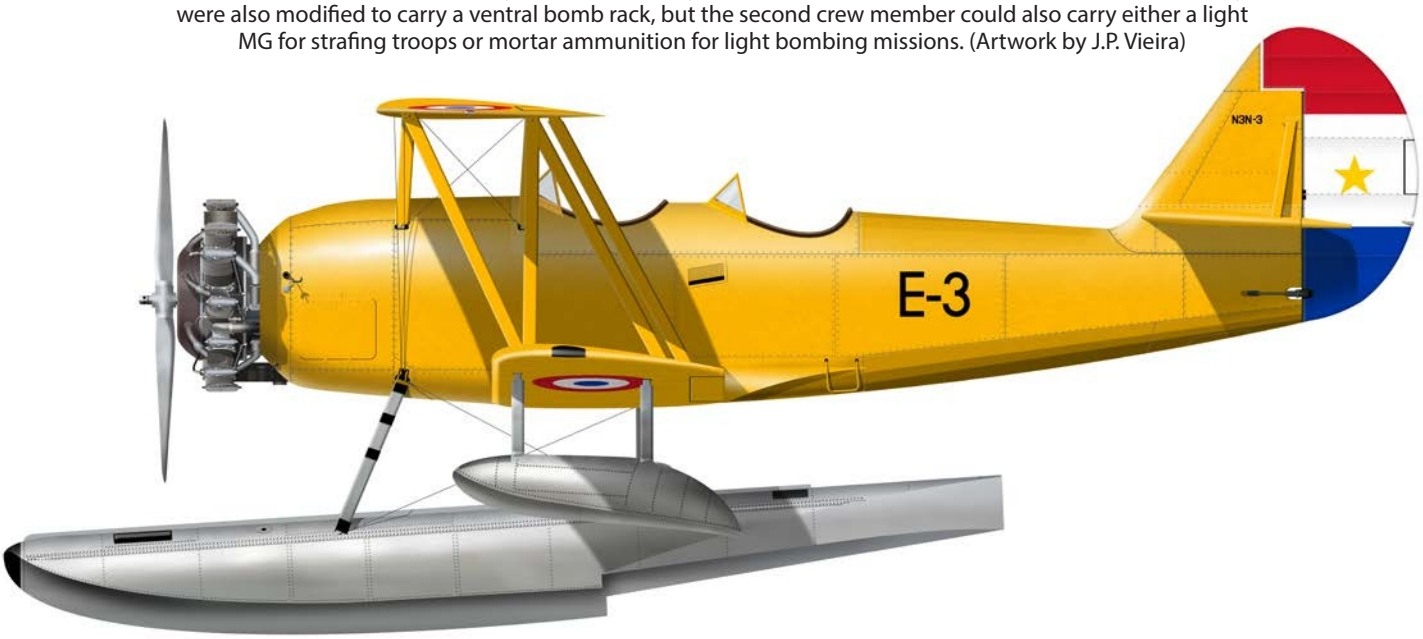
At least three Caproni-Bergamaschi AP-1 were put into service during the Revolution of 1947 in the Government Air Arm. They just kept the typical Italian cammo of dark green with khaki dots on the upper surfaces and light gray below, with the Paraguayan roundel in the four wing positions and the flag colors with a yellow star in the rudder. They had two fixed 7.7 mm Breda Safat MG in the wings for frontal fire and a movable one in the rear cockpit. It could carry up to 500 kilos of bombs in a ventral bomb compartment. Although "heavily armed", they were just used in recce missions. (Artwork by J.P. Vieira)

B. Revolutionary Air Arm

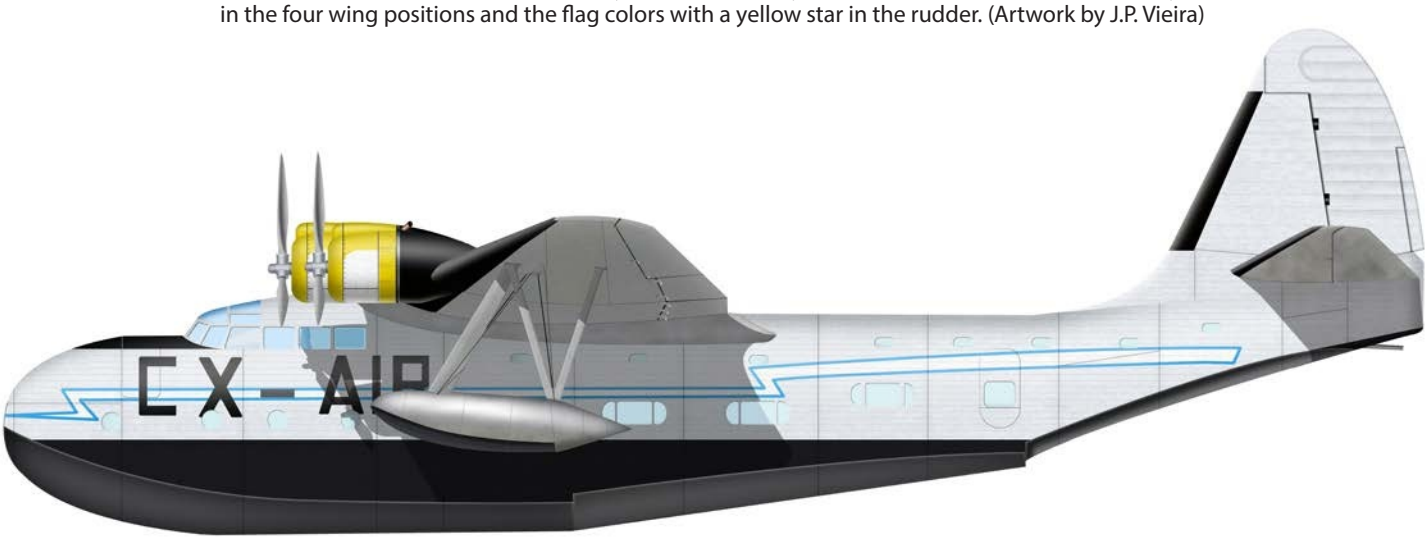


Five Fairchild PT-19As saw service in the Revolutionary Air Arm. They just kept the standard Paraguayan markings, roundels in the four wing positions and the flag colors with the yellow star in the rudder, but a black V was added in the fuselage and under the wings for identification. They were mainly used in recce missions. (Artwork by J.P. Vieira)

Four Vultee BT-13As were used by the Revolutionary Air Arm with the same color scheme as its PT-19s. They were also modified to carry a ventral bomb rack, but the second crew member could also carry either a light MG for strafing troops or mortar ammunition for light bombing missions. (Artwork by J.P. Vieira)



The two Paraguayan Naval Aviation N.A.F. N3N-3s were incorporated to the Revolutionary Air Arm. They were mainly used as VIP transport and for recce missions. They kept the overall yellow color scheme with the Paraguayan roundel in the four wing positions and the flag colors with a yellow star in the rudder. (Artwork by J.P. Vieira)



The TACI Sikorsky VS.44A registered CX-AIR in Uruguay was used to transport weapons and ammunition to the revolutionaries during the month of August 1947. It was destroyed after ditching in the River Plate during a night landing. (Artwork by J.P. Vieira)

Revolutionary Air Arm Deployments during the Revolution of 1947. (Map by George Anderson)

The Theatre of Operations in 1922. (Map by George Anderson)

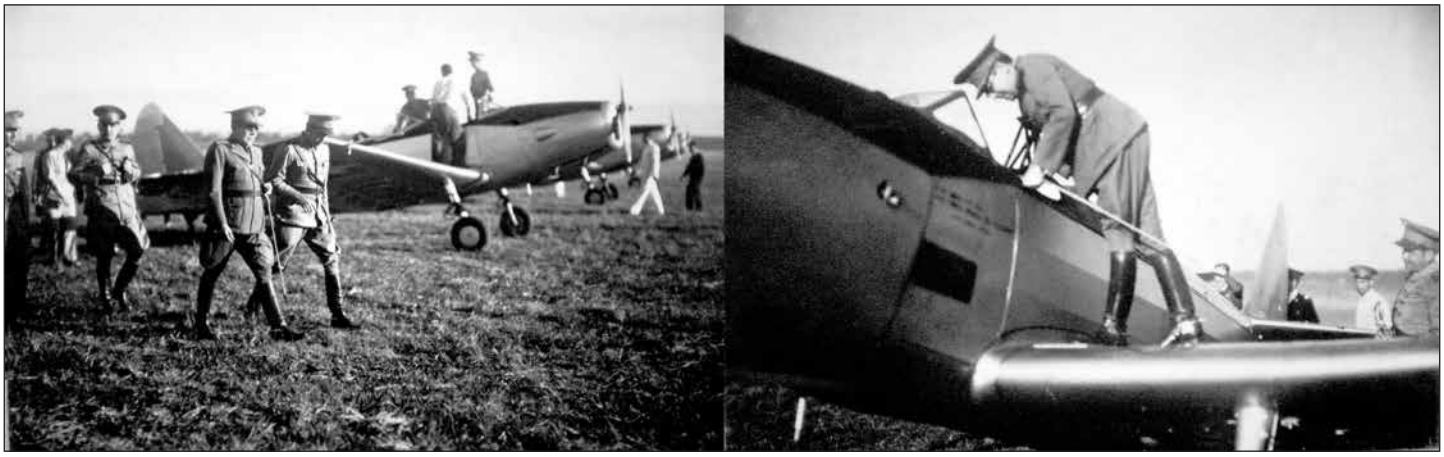
The Revolution of 1922–3: Theatre of Operations. (Map by George Anderson)

6 The political situation in Paraguay in the 1940s

In 1939, the former victorious Commander-in-Chief of the Paraguayan Army in the Chaco War, General José Félix Estigarribia, was elected President of the country. He was a very well-respected personality but unfortunately, he and his wife died in an airplane crash just a year after his inauguration day. He was succeeded by his Minister of War, General Higinio Morinigo, also a Chaco War veteran. Morinigo did not have the same charisma and began to rule as a dictator from the very beginning, with the support of the military's higher ranks and the Colorado Party, although a huge purge was carried out in the armed forces. General Morinigo got rid of many professional officers, replacing them with officers from the reserve, causing a lot of distress and discontent in the military forces, especially when Chaco War veterans were not only separated from the ranks but also imprisoned due to fake accusations of conspiracy against the government.

Meanwhile, a rather awkward coalition was being formed secretly in the first months of 1947, including the Febrerista, Liberal and Communist Parties, supported by the institutionalist military, most of the last retired from the active service, and many of them either in exile or imprisoned.

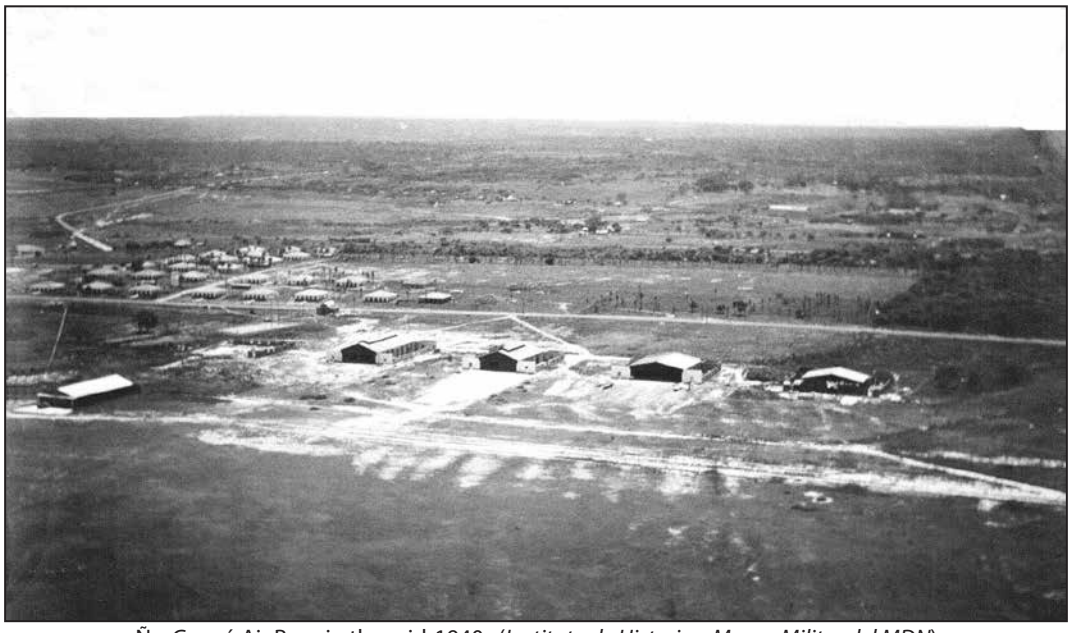
On 7th March 1947, a group of sympathizers of the Febrerista Party attacked the Police Headquarters in Asunción. They had expected the support of the nearby Military School, but when this did not happen the coup quickly collapsed. On the other hand, a Revolutionary *Junta* was formed just two days after, at the headquarters of the 1st Military Region in Concepción, in the north of the country. Other military regiments in the north and in the Chaco region joined the revolutionaries, and the insurgents immediately began to set up parallel organs of government, declaring Concepción the provisional capital of the country.



President General Higinio Morinigo inspecting the new Fairchild PT-19s at Ñu-Guazú Air Base in December 1942 (*Instituto de Historia y Museo Militar del MDN*)

7 The situation of the Armed Forces at the beginning of the conflict

At that time, the Paraguayan Army had around 8,000 active troops, including the officers, and it was organized in two infantry (Chaco and Concepción) and one cavalry (Campo Grande, Asunción) divisions. There was also an artillery regiment in Paraguarí, three frontier battalions (Pilar, Encarnación and Capitán Bado), and some minor units. The Navy, a 1,900-man force, had two 747-ton gunboats,



Ñu-Guazú Air Base in the mid-1940s (*Instituto de Historia y Museo Militar del MDN*)

Paraguay and *Humaitá,* undergoing maintenance in Argentina at that time, the gunboat *Tacuary,* which was out of service, the patrol vessels *Capitán Cabral* and *Coronel Martinez,* a couple of smaller patrol vessels, *Teniente Herreros* and *Capitán Figari,* and six motor launches. The Naval Aviation just had 2 Naval Aircraft Factory N3N-3 training hydroplanes in service.

Regarding the Paraguayan Air Arm, this was an 800-man force and, as previously mentioned, most of the Italian types had been withdrawn from service due to the lack of spare parts, with the exception of just a few Caproni AP-1 – undergoing maintenance in early 1947 – and both Caproni Ca.309 Ghibli. Most of the 33 American PT-19, BT-13, AT-6C and UC-45F trainers were in service, but many of them were in maintenance. By that time, none of the Chaco War survivors were in service. Some of the pilots and aircraft mechanics were being trained in Brazil or the U.S.

8 The Paraguayan Air Arm split in two at the beginning of the Revolution of 1947. Operation *Runaway*

Several pilots and mechanics of the Air Arm had been secretly meeting and discussing the political situation of the country, especially regarding those comrades who had been imprisoned without any reason, among them, Major PAM Isidoro Jara Cardozo (a Chaco War veteran), Captains PAM Félix Zárate Monges, Ismael Florentín, José Duarte and Luis Ugarriza, 1st Lt. PAM Luis Azzarini, Ramón Milciades Balbuena, José Bareiro, Abraham Giubi and Dario Latourrette, Lt. PAM Eladio Zárate and José Cabezudo, Sub.Lt. PAM Antonio Romero Diaz, David Ryan Ascurra and Adolfo Avalos, and the Navy Lt. Commander Damián Fretes Yodice (also a Chaco War veteran). Major PAM Lucio Ayala, a Chaco War veteran, was arrested later because he refused to fight against his comrades.

In the last days of February 1947, they learned that a revolutionary movement was being formed in Concepción and decided to join it. Since there were others who still supported the government, everything was done cautiously. So, the operational plan to defect was called *Operación Raje* (Operation *Runaway*). The idea was to simulate a routine training flight and once in the air, fly to Concepción.

In the first days of the conflict, revolutionary troops advanced south towards the town of Ybapobó, on the east bank of the Paraguay River, which was found deserted. The government troops, on the other side, starting marching northwards.

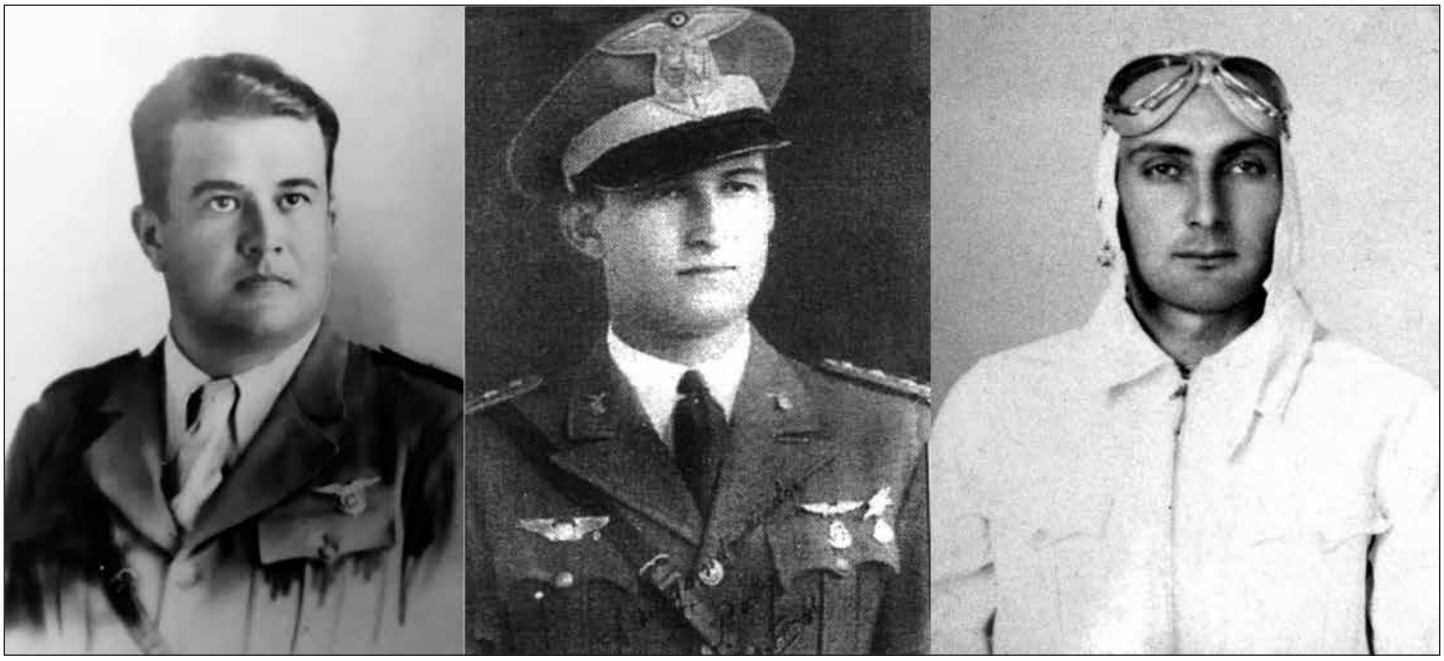
In the meantime, some pilots were ordered to fly reconnaissance and bombing missions against the rebel forces in Concepción. On 13 March, a pair of N.A. AT-6Cs dropped bombs on the revolutionary headquarters in the above-mentioned city causing some casualties. Other pilots refused to bomb their military comrades and were arrested and sent to a military prison.

So, on 17 March, five PT-19s and three BT-13s crewed by 1st Lt. PAM Pedro Cataldo, Luis Azzarini, Carlos Gracia Caballero, Nicolas Aparicio, Atilio M. Campos, Ángel Doldán, Miguel Angel Casco Miranda and Sub.Lt. PAM Alcibiades Olmedo took off and defected to Concepción. One pilot, Captain PAM Percio Amarilla Becker, and an aircraft mechanic, NCO MAM Ignacio Bauzá, were already there. Some days later, a number of aircraft mechanics including Major MAM Basilicio Acosta, Captain MAM Olimpio Ortiz, 1st Lt. MAM José G. González, Marcos Schulz and Juan González Raina and the NCOs MAM Fidelino Serrati, Heriberto Rosso Meza and Arnulfo Cubillas took as many tools as they could carry and also defected to Concepción. They travelled in a cargo ship that would also take some barrels of aviation fuel and lubricants.

At the beginning of the hostilities, the state-owned airline run by the Air Arm, *Líneas Aéreas de Transporte Nacional (*LATN*)* suspended all regular operations. At that time, its fleet was composed of 2 Travel Air S6000B, two Caproni Ca.309 Ghibli, three Consolidated Fleet 10, five Stinson SR-10 Reliant and two Stinson 108 Voyager.

Meanwhile, the Commander of the Air Arm, Brigadier General José Atilio Migone, a Chaco War veteran, resigned and the government appointed cavalry Lt. Col. Enrique Giménez as the new commander.

The government was left almost without flyable aircraft, so Major



From left to right, Major PAM (Ret.) Isidoro Jara Cardozo, 1st. Lt. PAM Dario Latourrette, Captain PAM Luis Ugarriza, just three examples of military pilots who were arrested by the General Morigino regime before the outbreak of the Revolution of 1947. (*Instituto de Historia y Museo Militar del MDN*)

A Paraguayan Air Arm Vultee BT-13 with a N.A. AT-6C flying in formation over Ñu-Guazú Air Base in the mid-1940s (*Instituto de Historia y Museo Militar del MDN*)

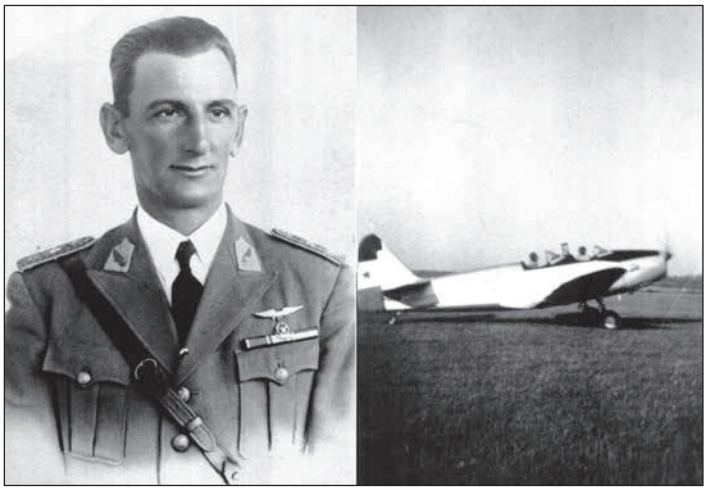
Some Paraguayan Air Arm Vultee BT-13s and N.A. AT-6Cs in the flight line at Ñu-Guazú Air Base in the mid-1940s (*Instituto de Historia y Museo Militar del MDN)*

Brigadier General José A. Migone (left) and Army Lt. Col. Enrique Giménez (right). (*Instituto de Historia y Museo Militar del MDN*)

MAM Agustin Pasmor, who was the Maintenance Chief of the Air Arm during the Chaco War against Bolivia, was again appointed to his old post, and in a few days he and his maintenance team would have some PT-19s, BT-13s and NA AT-6Cs ready for action. The pilots who remained loyal to the government were: Major PAM José Gregorio Morínigo, who served in the Army during this conflict, Captains PAM Enrique Déntice and Abdón Caballero Álvarez, the three of them Chaco War veterans, Captain PAM Fausto Miranda, 1st Lt. PAM Lorenzo Alliana, Carlos Muñoz, Epifanio Ovando, Ricardo Alliana, Horacio Acosta, César Villalba, Juan Duarte, Cirilo Cáceres Carisímo, César Giménez, Bernardo Gamarra, Sub.Lt. PAM Adrián Jara, René Zotti, Aniano Orué, Herbert Leo Novak and Luis González Ravetti. A civil pilot, Alberto Enrique Fragnaud, was incorporated into the Government Air Arm with the rank of Sub. Lt. during the revolution. Regarding the aircraft technicians, Major MAM Agustin Pasmor, Manuel Lenguaza, Raúl Sosa Valdez and Leopoldo Schoeder, all Chaco War veterans, Captain MAM Anastasio Cáceres, Adolfo Arriola and Alejo Silva, NCOs MAM Adolfo González, Ismael Pavetti, Fidelino Serratti, Juan Benítez, Eladio Rodríguez, Pablino Vera, Fernando Quiñonez, Aurelio Zárate, Del Rosario Genes, Néstor Vera, Simón Acosta, Ricardo Gregor, Gerardo Schussmuller, Arnulfo Cubilla, Mario Zelaya, Eliseo González, Bienvenido Maldonado, Catalino Lenguaza, Adriano Peña, Odilio Otazú, Virgilio Ruiz, Juan Ramírez, Gerardo González, Antonio Moreno, Estanislao Liuzzi, Máximo Antonio Argaña and Antonio Alfio Insfrán. Some Army

Revolutionary pilots and aircraft mechanic with a Vultee BT-13 in Concepción. Note the black V painted in the fuselage. (*Pedro Cataldo*)

From left to right, an unidentified aircraft mechanic, Major MAM Agustin Pasmor, Lt. MAM Pablino Vera and Captain Obs. Aer. Augusto Fuster, with a Government Air Arm N.A. AT-6C. Note the red-white-blue stripes on the fuselage. (*Col.MAM Agustin Pasmor*)

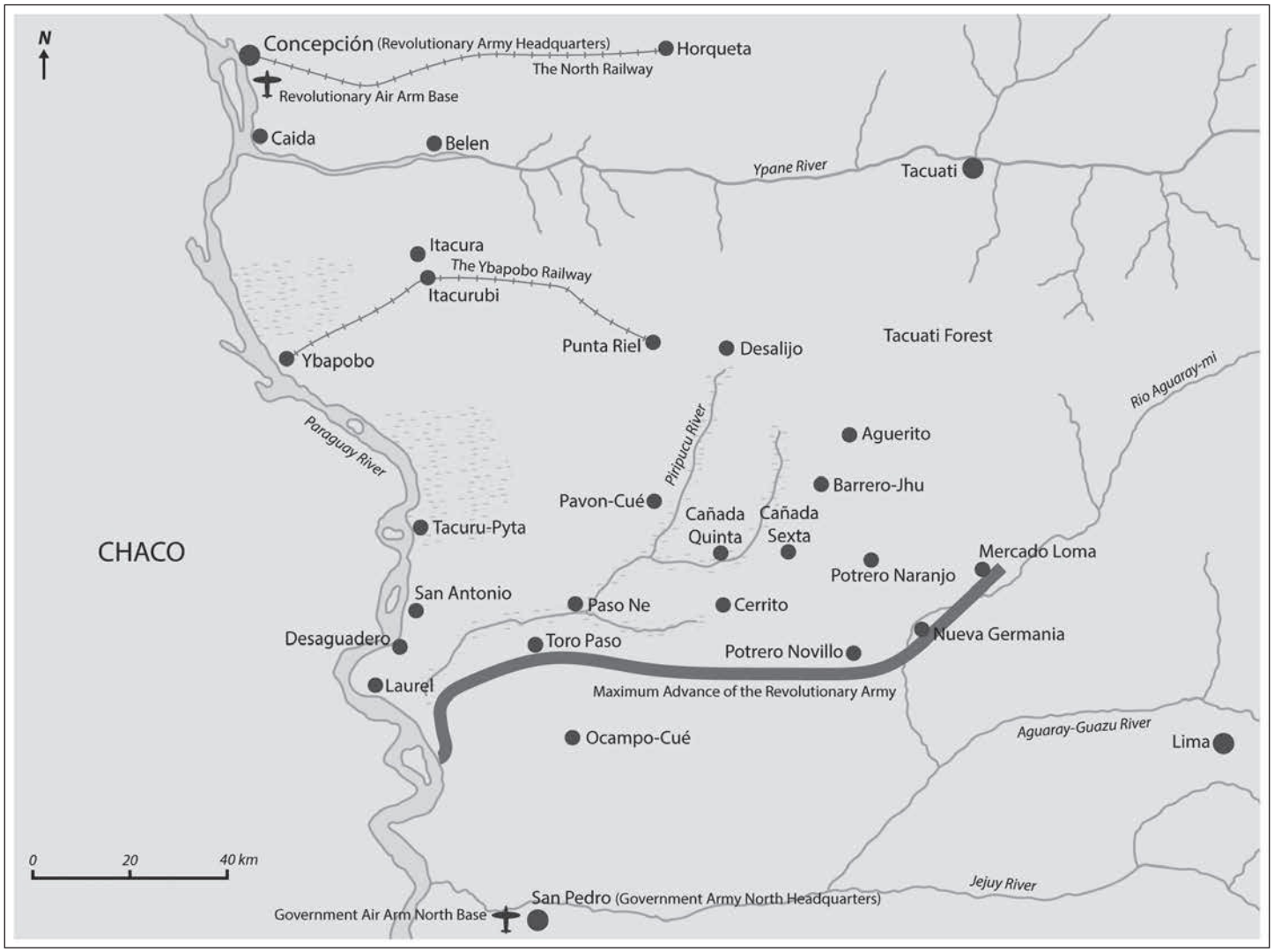


1st Lt. PAM Lorenzo Alliana (left) who was KIA on 22.03.47. A Paraguayan Air Arm Fairchild PT-19 at Ñu-Guazú Air Base (*Instituto de Historia y Museo de Historia Militar del MDN*)

officers and NCOs, Captains Juan Acuña and Augusto Fúster, Sub.Lt. Armín Olmedo, and NCOs Pedro Figueredo, Francisco Salazar and Pedro Valenzuela were also incorporated as gunners and armourers.

The Government Air Arm could count on the USAF Military Air Mission to Paraguay which was commanded by Colonel Karl T. Barthelmess, who was replaced by Col. Robert M. Batterson in July 1947. Other members of the mission included Captain Oscar A. Bradford Jr., and Staff Sergeants Anthony R. Silva and Otto J. Tobis.

The first air actions of the Revolutionary Air Arm took place on 18th March when some PT-19s and BT-13s strafed and bombed the government troop concentrations in Belén-Cué and Paso Né, close to the city of San Pedro. Since the PT-19s and BT-13s could not be armed, the second crew member carried a light machine gun, and some mortar ammunition and hand grenades that were thrown by hand. The day after, a pair of BT-13s bombed some government troop



The North Front during the Revolution of 1947. (Map George Anderson)

A Catholic mass at the Presidential residence in Asunción – with the First Lady Mrs. Dolores Ferrari de Morinigo (third from the left), the President General Higinio Morinigo (centre), some civilian officials and two Aviation Cadets – in memory of 1st.Lt. PAM Alliana. Note the Fairchild PT-19 in the rear, for presidential use. (*Instituto de Historia y Museo Militar del MDN*)

trucks successfully near the Jejuí River, between Puerto Antequera and San Pedro. Some days later, two of the revolutionaries' BT-13s flew over Asunción, the capital, dropping some grenades that caused only minor damage and no casualties, but it was a demonstration that the rebels could bomb the city.

Having successfully repelled the first weak attacks by the government troops, the revolutionary command decided to carry out a fast training course for their raw recruits in Concepción. Meanwhile, a battalion was sent to the west bank of the Paraguay River, in the Chaco region, so as to expel some untrained government troops that were harassing the ranchers supporting the revolution.

During the month of March, the rebel forces in the north had a total of 3,543 troops plus 285 of the logistic services and 165 of the medical corps. Regarding armament, they counted on 11,000 rifles, 64 mortars, 170 heavy and 227 light machineguns, and 6 million rounds of 7.65mm ammunition. For ground transport, they had 74 cars and jeeps, 100 trucks, 87 tractors and 47 trailers.

On 22 March, during a recce mission over the revolutionary positions, a Government Air Arm PT-19 crewed by 1st Lt. PAM Lorenzo Alliana as pilot, and NCO MAM Lorenzo Paredes as observer, was hit by ground fire from the rebel forces. The pilot received a fatal shot in the head and the NCO had to fly the aircraft until he found an open field near the city of San Pedro, where he crashed landed but saved his life. Alliana was promoted to Captain posthumously.

At the end of March, the Revolutionary Command planned a general offensive in order to capture the city of San Pedro, where the government troops had their headquarters. A rebel cavalry regiment initiated a flank movement from the east toward the road between Concepción and Pedro Juan Caballero, then going towards Nueva Germania to emerge on the eastern side of San Pedro. A rebel infantry regiment carried out a diversionary movement in the Chaco in the area of the Montelindo Ranch. The main attack was going to be led by the revolutionary 2nd Division, which had to cross a swampy area first. That was done without incident and the final attack was planned at dawn, but for some reason it was delayed for three hours. When the attack was launched, it was already mid-morning and the government artillery opened fire on them. The artillery fire was so intense that the rebel troops had to retreat.

9 Bombing and reconnaissance missions

The Revolutionary Air Arm kept the Paraguayan roundels and the colours of the flag on the rudder, with the yellow star in the white stripe, as identification marks, adding a black V (for Victory) on the fuselage and wings.

Since all the Paraguayan Air Arm were painted with the same colour scheme, the government decided to use alternative markings which consisted in red-white-blue oblique stripes on the wings and the rear fuselage, and overall red empennage.

On 23 March, very early in the morning, three revolutionary BT-13s bombed the government positions in Viñas Cué and some PT-19s dropped propaganda leaflets over Asunción. Government troops shot profusely at the aircraft but with no effect. Some days later, government BT-13s and AT-6Cs bombed the rebel troop concentrations in Concepción, causing some casualties. On the 28th, a revolutionary PT-19 crewed by 1st Lt. PAM Carlos Gracia Caballero, on a reconnaissance mission, was shot down by AA fire near the town of Capitan Bado, in the north of the country. Fortunately, he was able to crash-land his plane and only received minor wounds. After walking for several hours, he reached his base in Concepción.

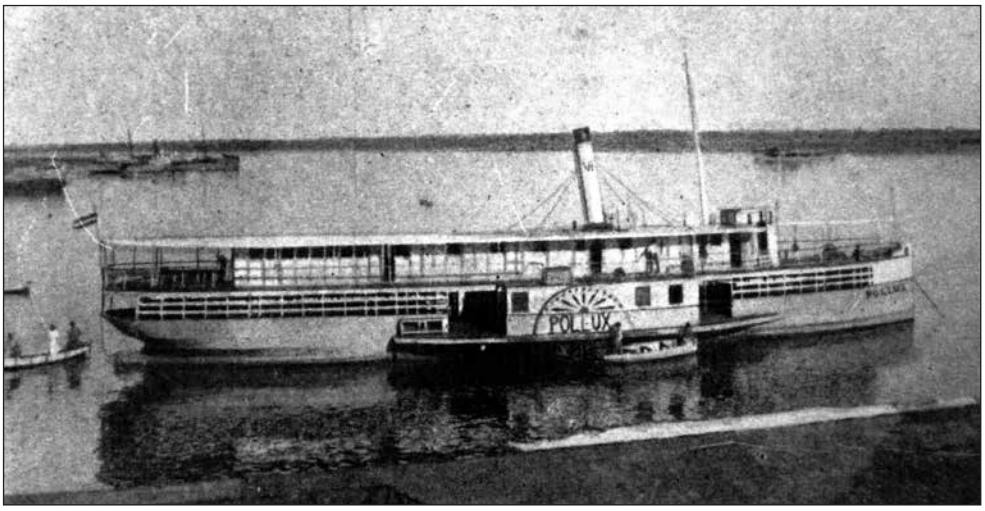
On the 29th, rebel planes bombed Ñu-Guazú and government positions in Luque and Limpio. By that time, the revolutionary mechanics were able to adapt a rudimentary ventral bomb rack to the BT-13s and something similar was also performed in the government Vultees.

By the end of March, the Government Air Arm could count on four Fairchild PT-19, five Vultee BT-13, two N.A. AT-6C, two Beechcraft UC-45F, two Caproni Ca.309 Ghibli, one Travel Air S6000B and three

A Revolutionary Air Arm Vultee BT-13, serial 66, at Concepción Air Base in 1947. (*Arq. Eduardo Alfaro Riera*)

Two Revolutionary Air Arm pilots, 1st. Lt. PAM Carlos Gracia Caballero and Miguel Angel Casco Miranda, studying a map before a sortie at Concepción Air Base. (Author's files)

Major MAM Agustin Pasmor (second from the right) with a civilian and some officers posing with a Government Air Arm Vultee BT-13 at Ñu-Guazú Air Base in 1947. (*Col.MAM A. Pasmor*)



The Revolutionary transport boat *Pollux* (*Author's files*)

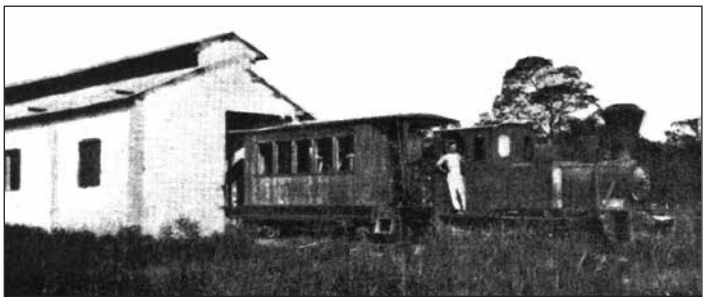
ammunition and light weapons, was attacked by a government AT-6C and a BT-13 while navigating on the Paraguay River towards Concepción. Some crew members were wounded, and the engine was hit, so the ship was forced to beach itself on the bank of the river and was captured by government troops.

During the first two weeks of April, the revolutionary forces dug in on the north bank of the Ypané River, while the Government troops did so on the south bank. Several skirmishes occurred during that time but neither of the forces took the initiative.

During that month, a government AT-6C unsuccessfully strafed a train carrying the coffins of revolutionary soldiers to a cemetery, some kilometres away from the city of Concepción. Some passengers just jumped out of the train as the attacking plane dived towards it, but the train conductor did not stop and kept on going at full power. On the other hand, a rebel BT-13 and PT-19 strafed and bombed a column of government trucks carrying troops and caused some casualties.

In mid-April, one of the revolution's leaders, Colonel Rafael Franco, a Chaco War veteran, arrived in Concepción on board of the Naval Aviation N3N-3 serial E.3, crewed by the Navy Lt. PAN Ismael Peralbo.

On the 28th, the second Naval Aviation N3N-3, serial E.5, crewed by Navy Lt.Commander PAN Juan José Alborno Ortíz and Lt. Commander Rossi, defected to Concepción. The Revolutionary Air Arm could then count on both hydroplanes for reconnaissance missions. Meanwhile,



The North Railway that connected the city of Concepción with Horqueta (*Author's files*)

The Paraguayan Navy gunboats *Paraguay* and *Humaitá* seized by Revolutionary Naval Officers, navigating towards Paraguay. (*Armada Paraguaya*)

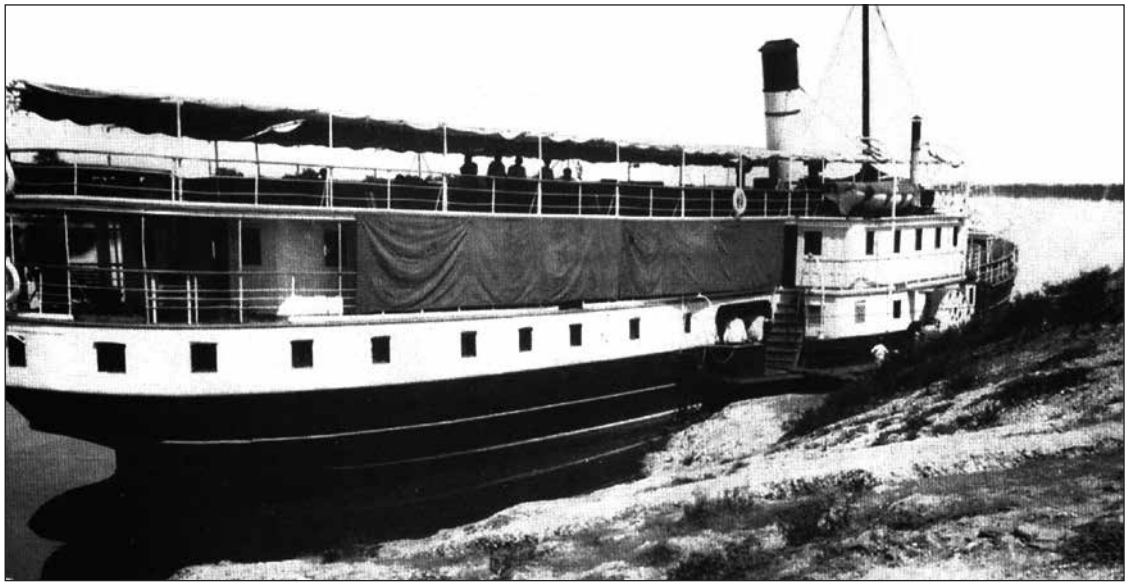
Caproni AP-1, thanks to the hard work of its maintenance chief Major Pasmor and his team.

On 31 March, a revolutionary PT-19 crewed by 1st Lt. PAM Atilio Campos and 1st Lt. PAM Luis Azzarini, on a reconnaissance mission over the Pirí-Pucú sector, was shot down by AA fire. Azzarini would bail out and was captured by government troops and confined to a military prison for the rest of the conflict, but Campos died on impact.

Some days later, on 3 April, the rebel ship *Pollux,* carrying a pair of the Government Air Arm's Caproni AP-1 flew over a rebel troop concentration to adjust artillery shots. Once they were located, the government artillery supported by a pair of AT-6s and some BT-13s bombed the rebels, causing many casualties, and forcing them to retreat.

On the same day, government BT-13As strafed and bombed the revolutionary ship *Tte. Pratts Gill* carrying troops and ammunition to the south of the country, in order to open up another front. The bombs damaged the ship, which had to stop on the Argentinean coast

Naval Aviation Lt. PAN Ismael Peralbo (left) and a Revolutionary NAF N3N-3 in Concepción. (*Author's files*)



The Revolutionary transport ship *Tte. Pratts Gill* (*Armada Paraguaya*)

A Paraguayan Air Arm North American AT-6C Texan at Ñu-Guazú in the mid-1940s. (*Instituto de Historia y Museo Militar del MDN*

for repairs, where it was interned.

At the end of April, Navy personnel initiated a revolt in the Sajonia Naval Base in Asunción, supported by the civilian workers of the Naval Arsenal. The government moved quickly, and a cavalry regiment supported by the Military School cadets was sent to fight the naval forces. The rebel forces were attacked with artillery fire, and the government cavalry regiment troops would penetrate the rebel base after three days of fierce fighting. The battle cost 65 lives and 175 wounded.

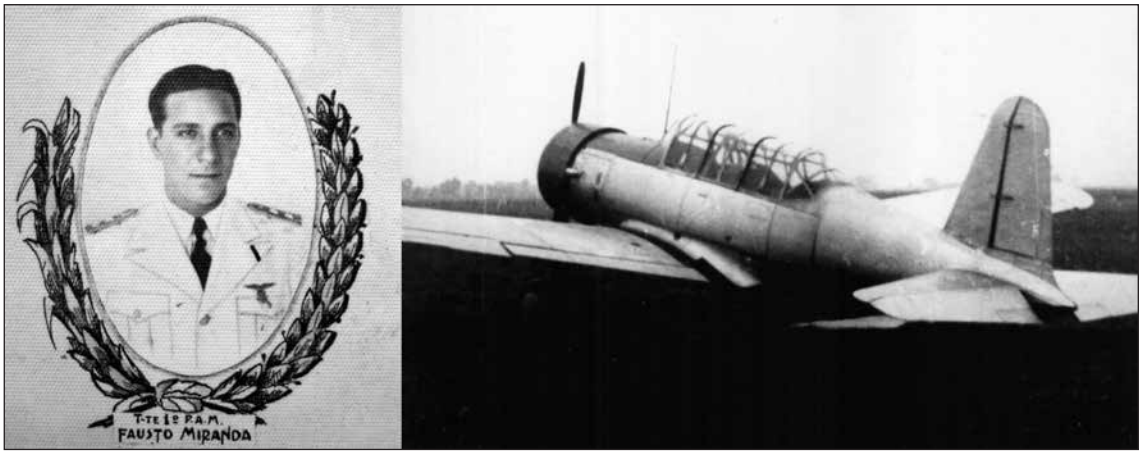
During the month of May, both Air Arms carried out reconnaissance and bombing missions against the enemy. On the 7th, a pair of rebel BT-13s attacked the government positions in Puerto Rosario.

Two days later, the crew of the Navy gunboats *Paraguay* and *Humaitá,* which were in Buenos Aires for maintenance, seized the ships and arrested their superior officers, who did not want to join the revolution, and were held prisoner. They left the port of Buenos Aires and headed to Carmelo, Uruguay, where a load of 250 rifles were picked up for the revolutionaries. They then headed to Paraguay, being escorted by two Argentinean Navy minesweepers.

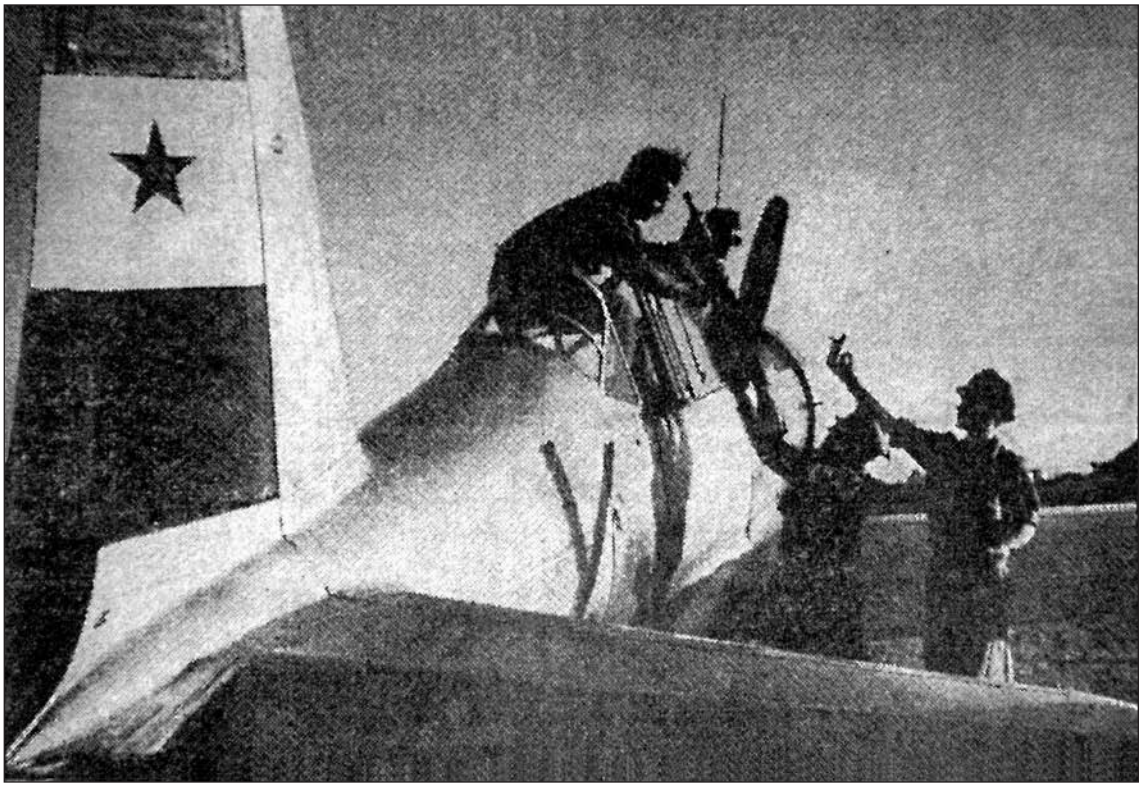
Besides these two gunboats, the revolutionary navy could also count on two tugs, *Desarrollo* and *Boquerón,* and some motor launches. On the same day, two government AT-6Cs strafed and bombed the revolutionary troops in the Potrero Naranjo area, with the aid of artillery fire, causing many casualties to the enemy.

On 14th May, the anniversary of the Independence of Paraguay, many elementary and high school students, teachers and civilians were participating in an event in downtown Concepción when three government AT-6Cs bombed the area, killing some and leaving many wounded. Some days later, two AT-6Cs attacked the revolutionary vessel *Ituzaingó,* which was carrying troops, provisions and ammunition from Bahia Negra to Concepción, causing some casualties but not damaging the boat. On the 21st, once again a pair of AT-6Cs strafed and bombed the revolutionary positions in Aguerito and Montelindo, in the north of the country, causing some casualties. A few days later, the same Texans bombed two small revolutionary boats on the Paraguay River near the town of Ybapobó, sinking them.

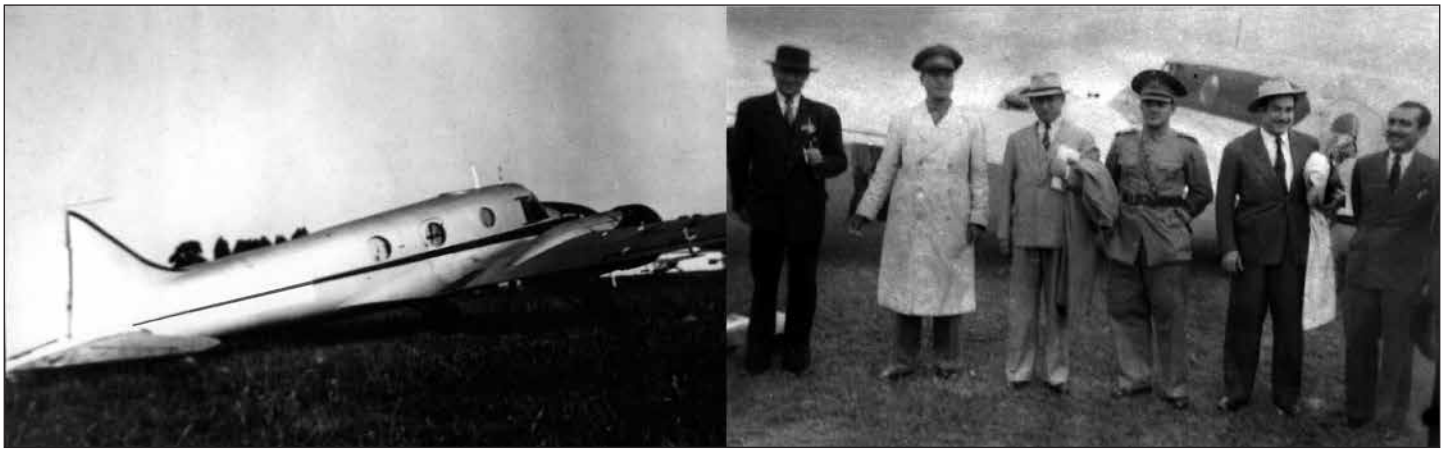
On the 25th, two government BT-13s and a single AT-6C strafed and bombed the revolutionary troop concentrations which were retreating in the Ypané zone, towards Desalijo and Punta Riel. In the meantime, the government continued to concentrate more arms,



1st Lt. PAM Fausto Miranda and one of the Argentinean BT-13 purchased by the government. (*FAP and Francisco Halbritter*)



The ground crew is handing over a light machine gun to the eventual gunner of a Revolutionary Air Arm BT-13 in Concepción for a sortie. (*Newsweek, via Dr. Gary Kühn*)

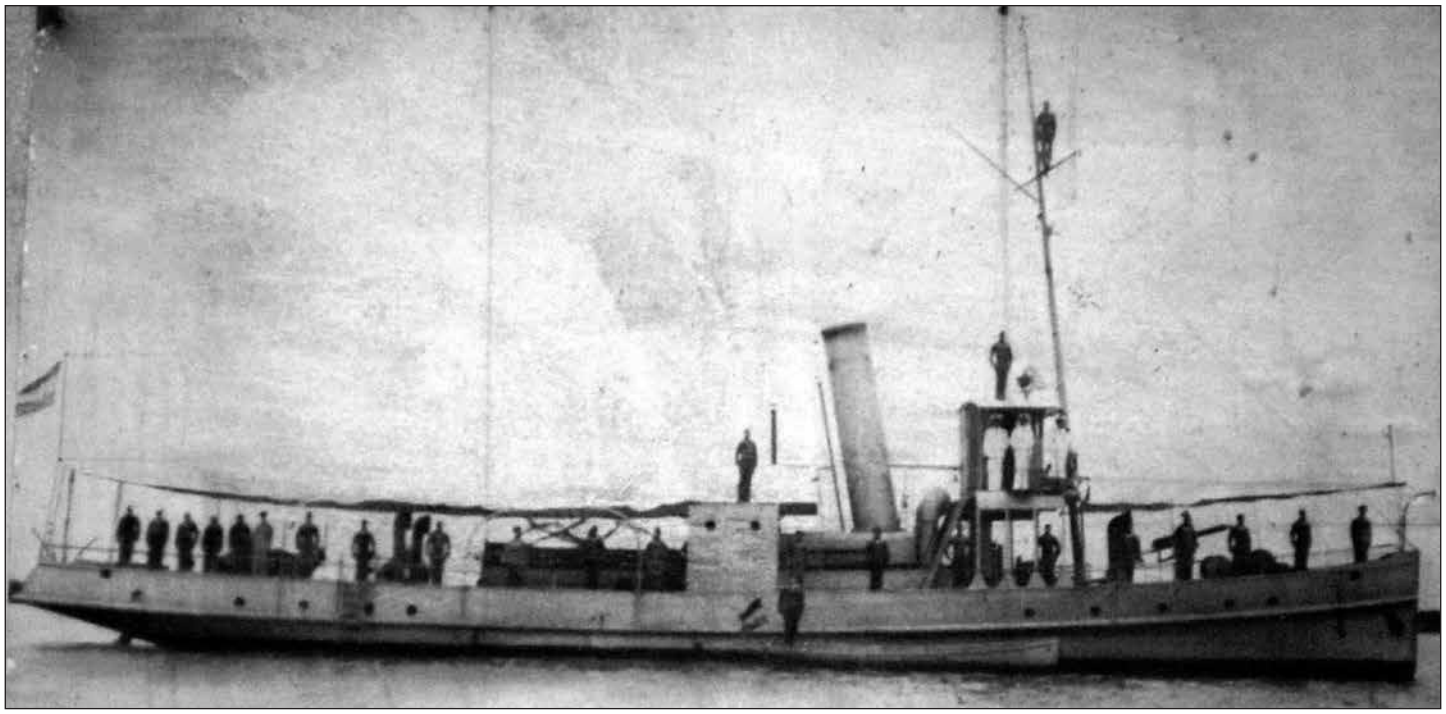


The Government Air Arm Avro Anson Mk.V purchased in Argentina (left). Some military and civilian officials posing in front of the Anson at Ñu-Guazú Air Base in 1947. (*Francisco Halbritter and Instituto de Historia y Museo Militar del MDN*)

equipment and troops in San Pedro.

On 27th May, revolutionary regiments conquered the loyalist garrison in Tacuatí, taking 250 prisoners and captured three 75 mm-guns, a 37 mm anti-tank gun, five mortars, 6 heavy and 14 light machineguns.

During the month of June, the government of Gen. Morinigo purchased two second-hand Vultee BT-13s which were owned by the *Compañia Aerotécnica Argentina*. The first Vultee was crewed by



The patrol boat *Capitán Cabral* in the hands of the Government Navy.
(*Armada Paraguaya*)

Major MAM Basilicio Acosta, a Chaco War veteran who joined the revolutionaries. (*Instituto de Historia y Museo Militar del MDN*)

The gunboat *Humaitá* in the hands of the Revolutionaries.
(*Alberto del Pino Menck*)

Major PAM Fausto Miranda as a pilot, with Lt.PAM César Gimenez and NCO MAM Nestor Vera y Aragón in the rear cockpit. They took off from Buenos Aires on 16 June and made several stops. They reached Paraguay on the 19th but had to cross a severe storm front between the towns of Quyquyhó and Mbuyapey. Unfortunately, they could not make it and were forced into an emergency landing, killing the pilot, and with the other two crew members surviving with some injuries. The other BT-13 would reach Ñu-Guazú Air Base with great difficulties and had a very hard landing, which caused some damage. Major Miranda was promoted to Lieutenant Colonel posthumously. On the 13th, a government AT-6C bombed a revolutionary barge, which was carrying troops, in the Tacuatí area.

During the month of July, there were some aerial actions too. On the 2nd, a government PT-19, crewed by 1st Lt. PAM Ricardo Alliana, crashed right after taking off from the town of Humaitá in the south of the country, killing the pilot. He was promoted to Captain posthumously. On the 8th, several government PT-19s and BT-13s bombed the revolutionary positions in Ybapovó and Puerto Milagro successfully. Some days later, on the 10th, as soon as both Navy gunboats entered Paraguayan waters, the government troops requested air support. Just a day after that, the gunboats were both bombed by government AT-6Cs near Cerrito Island, but experienced only minor damage. The aerial attack was repeated on the following day, dropping some 18 bombs, which caused more damage to both ships. One 210-pound bomb hit the *Humaitá* causing some casualties and destroying the central gunfire director. As a consequence of that action, some wounded members of their crew had to be landed near Coratei and San Pablo for medical treatment.

Also on the 11th, the government purchased an Avro Anson Mk.V in the Argentinean civil market and hired a retired naval pilot from that country, whose surname was Scasso, to ferry the plane to Asunción. It was used to deliver supplies to the loyal army in the north.

Some days later, the government navy transported some troops in the patrol boat *Capitán Cabral* and the vessels *Mcal. Estigarribia, Helen Gunther* and *Tirador* in order to assault and capture the revolutionary gunboats, but once they arrived in the area, the ships had already left. However, they landed there anyway, with aerial support and would

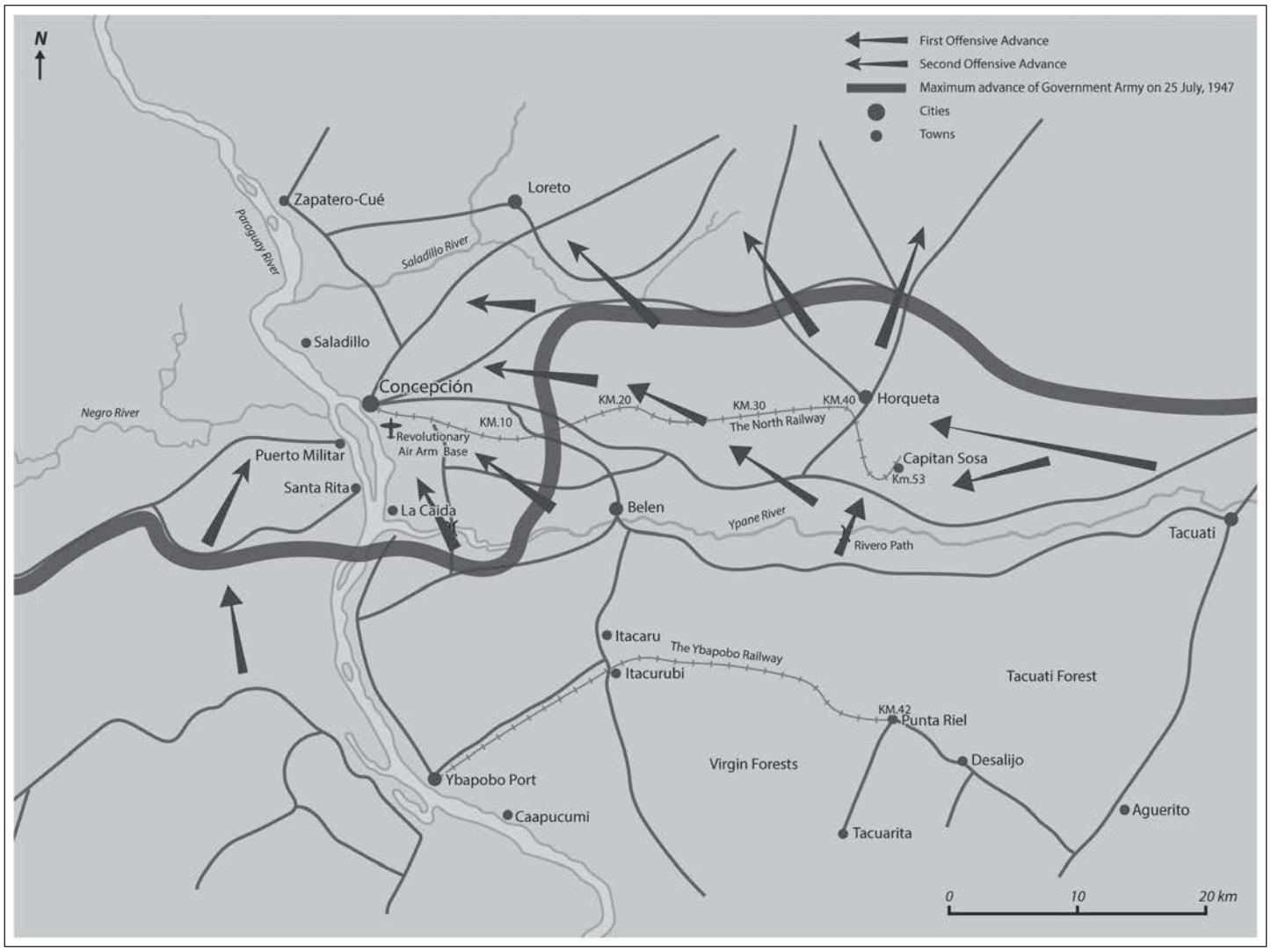
successfully attack rebel positions.

Since the rebel gunboats were under constant attack, and they could not continue navigating north, their crew decided to turn 180° and seek internment in the Argentine waters.

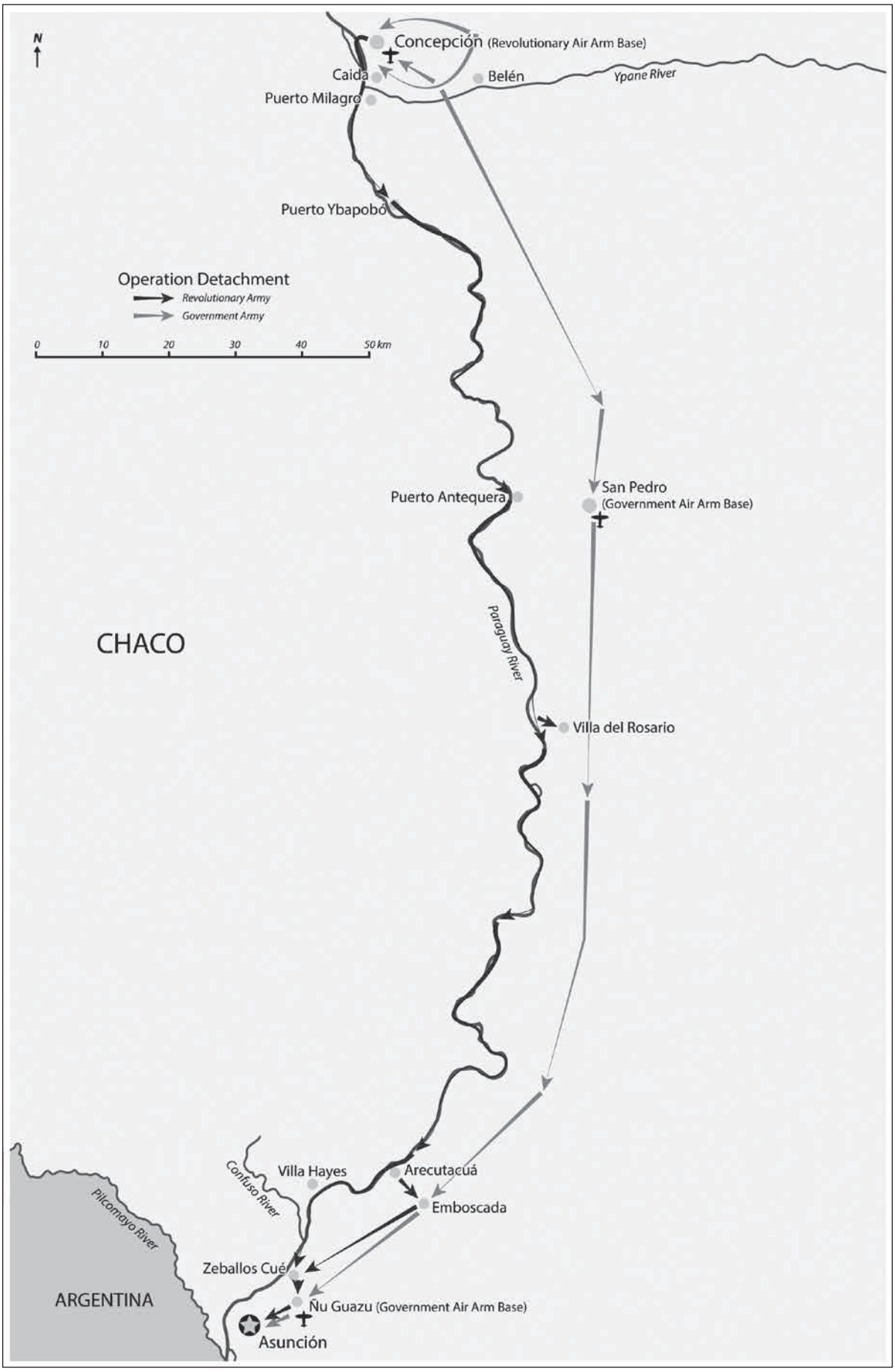
During this conflict, the Argentinean government of General Juan Domingo Perón supported its Paraguayan counterpart led by General Higinio Morinigo, mainly providing ammunition and light guns. On the other hand, the Uruguayan government supported the revolutionaries in many ways, especially with radio broadcasts but also with ammunition and guns. The Brazilian government offered its intermediation through its ambassador in Paraguay, Negrão de Lima, but no agreement was reached since Morinigo demanded the unconditional surrender of all revolutionary troops and the rebels wanted the President's resignation. According to some serious sources, on the other hand, the *Força Aérea Brasileira (FAB)* "lent" four N.A. AT-6s with their crews, which were appropriately painted with the Government Air Arm colours for some reconnaissance and aerial photography missions in the north front during the months of June and July.

Meanwhile, the government army, which had then gathered around 8,000 effectives, continued its advance towards the city of Concepción. It was then that the revolutionary *Junta* planned an amphibious assault on the capital, Asunción, which was known as *Operación Desprendimiento* (Operation *Detachment*).

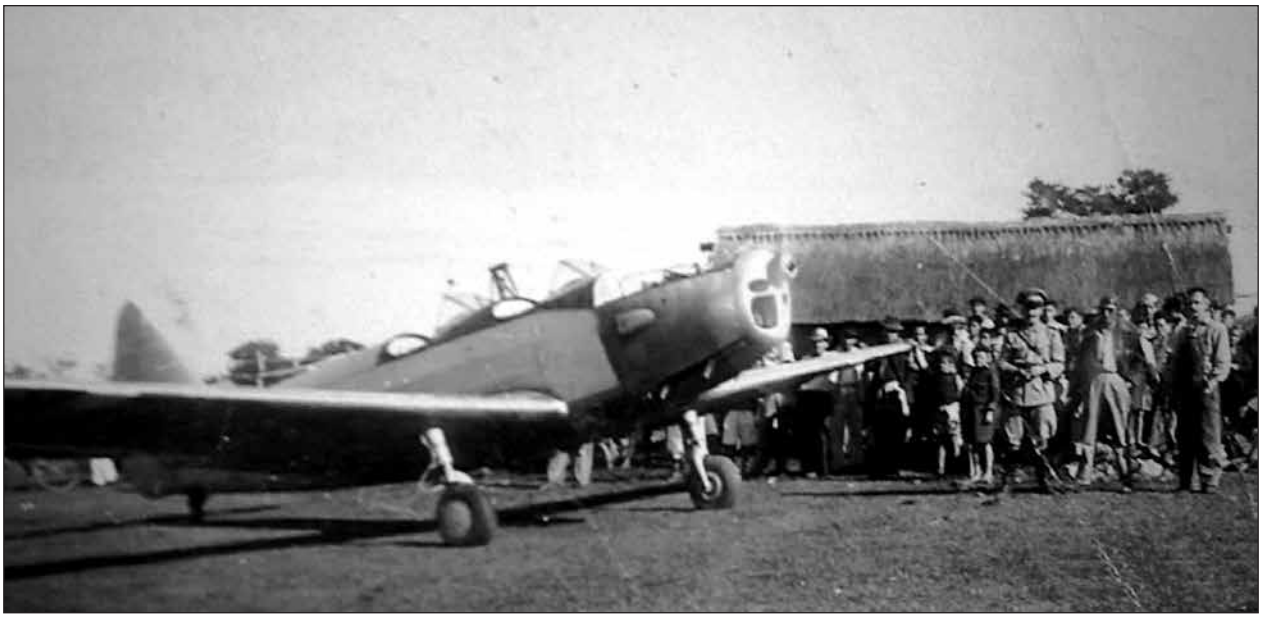
A Paraguayan Air Arm Beechcraft UC-45F. (*Demóstenes Mazó*)



The Government Army offensive to Concepción in July 1947. (Map by George Anderson)

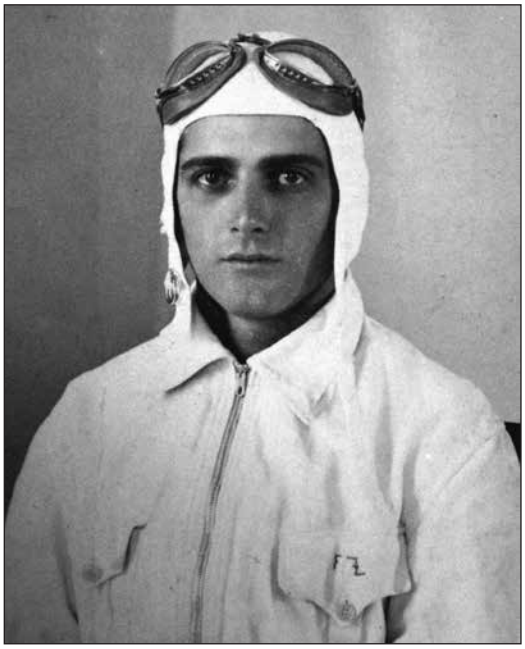


Revolutionary Army Operation Detachment in late July 1947. (Map by George Anderson)



A Government PT-19 in an airfield in Coronel Bogado. (*Author's files*)

Major PAM Abdón Caballero Alvarez (right) discussing an aerial operation with two Government Army officers at Ñu-Guazú Air Base in July 1947. (*Instituto de Historia y Museo Militar del MDN)*



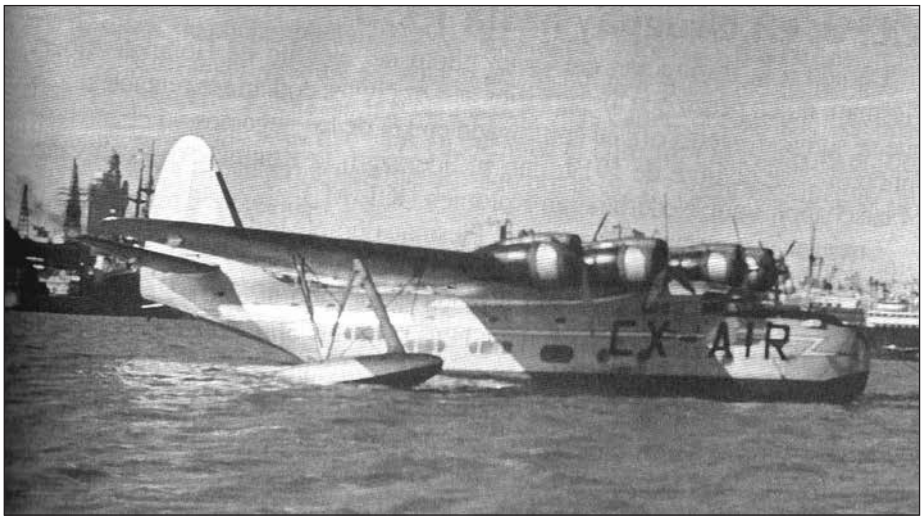
Major PAM Enrique Déntice, a Chaco War veteran who served in the Government Air Arm. (*Instituto de Historia y Museo Militar del MDN*)

10 Operation *Detachment*

The rebels soon realized that it was just a matter of time before the government troops reached Concepción. Since they were outnumbered and outgunned, the revolutionaries conceived a plan to embark their main force on river ships and boats and attack the capital, with air support, since Asunción was left lightly garrisoned. At that time, the revolutionary army consisted of 2,500 effectives.

On 28 July, two government PT-19s and two BT-13s dropped bombs on the rebel positions near Concepción and also flew over that city to observe an unusual movement of troops and ships near the port, which was reported to Morinigo. At first, the government thought that since the rebel situation was relatively desperate, the troops would head north to Brazil. On the following day, the revolutionaries started boarding the three armed-vessels, ten barges and 24 minor boats, on which they proceeded down the river. All the flyable aircraft were redeployed to the north of Concepción, first to a ranch called Toldo-Cué, and then to Puerto Pinasco on the west bank of the Paraguay River, in the Chaco. Once the pilots received the information that the revolutionary fleet was near the capital, they flew all of their aircraft to Villa Hayes, to prepare the aerial support to seize Asunción.

On 31 July, three government aircraft defected to the rebels, including a Beechcraft UC-45F crewed by Captain PAM Eladio Velazquez and NCO MAM Fidelino Serrati, a N.A. AT-6C with Lt.PAM Luis Ayala Britos and NCO MAM Areco, and a Vultee BT-13A with 1st. Lt. PAM Abraham Giubi. With these additions, the Revolutionary Air Arm consisted of three PT-19, three BT-13, one AT-6C, one UC-45F and two NAF N3N-3, totalling 10 aircraft. On the other hand, the Government Air Arm had 19 aircraft including two Caproni Ca.309 Ghibli, three Caproni AP-1, five Fairchild PT-19, four Vultee BT-13, two N.A. AT-6C, one Beech UC-45F, one Travel Air S6000B and one Avro Anson Mk.V. On that day, the government



TACI Sikorsky VS.44A CX-AIR. (*Eduardo Luzardo*)

troops took Concepción, and found only the civil population.

The revolutionary commanders estimated that they would reach the capital in about 40 hours, whereas it would take the government troops between 15 and 20 days to march southward to Asunción. During the cruise down the river, the revolutionary fleet stopped a few times to establish some small garrisons along the river bank so as to destroy any shipping which the government might be able to get. The first obstacle for the revolutionaries was the government garrison in Puerto Milagro, where the loyal navy gunboat *Coronel Martinez* was anchored.

The revolutionary fleet had first set off northwards in order to persuade the enemy that they were fleeing to Brazil. Some government aircraft reported that intention during a recce mission, but as soon as they flew away, the fleet turned 180° and headed towards Puerto Milagro. On 1st August, at 2:45am, the rebel troops landed completely by surprise and captured the garrison. The attack was supported by three infantry columns that had disembarked a few kilometres to the north and attacked the above-mentioned garrison from the landward side. The rebels also captured two vessels, the patrol boat *Coronel Martinez* and the civilian ship *Ñeembucú*.

The revolutionaries then captured Ybapobó on the following day. During this battle, one of the rebel commanders, Colonel Alfredo Ramos, a Chaco War veteran, was badly injured and had to be evacuated to Puerto Pinasco in a hospital ship.

On 4th August, a government AT-6C, crewed by Major PAM Enrique Déntice and Captain PAM Epifanio Ovando, bombed the rebel barge *Rio Verde* which was carrying ammunition, artillery pieces and a dismantled Fairchild PT-19, near the city of Antequera. One of the bombs hit the barge and there was a huge blast that destroyed the vessel, which finally sank. During the following days, more air raids were carried out with AT-6Cs crewed by the above-mentioned pilots and also 1st Lt. PAM Cesar Giménez and Horacio Acosta, causing many casualties in the revolutionary fleet.

11 The Sikorsky VS.44A raid

As was previously mentioned, the Uruguayan government supported the revolutionaries, as well as many former Paraguayan Army and Navy officers who were exiled in that country. They prepared a huge cargo of weapons, ammunition and medical drugs to be flown to Paraguay in the *Transportes Aéreos de Carga Internacional (TACI)* Sikorsky VS.44A flying boat registered CX-AIR. It was previously in service with American Export Airlines (AEA) and later American Overseas Airlines (AOA) as NC41882 *Exeter.*

Two flights were planned, the first one being on 2 August. The VS.44A landed on the Paraná River near the Paraguay River late in the afternoon, with the protection of the revolutionary gunboats *Paraguay* and *Humaitá*. The precious cargo was unloaded all night and it took off to Uruguay early in the following morning.

The second trip was on 15tAugust but when the VS.44A arrived at the landing zone, it was received by heavy AA fire, so the operation was aborted, and it flew back to Montevideo. When the Sikorsky reached the Uruguayan capital, it was already dark, and they tried a night landing at the River Plate, but crashed and sank. Of the 12 people on board, only three of them survived. The crew was composed of Richard Granier (pilot), Charles Fisher (co-pilot), Bill Miller (radio operator), Cornelius Dineen (mechanic) – all Americans – and Alcides Perdomo (second pilot) and Haakon Igertson (flight attendant). The passengers were Major Alejandro Sienra, Colonel Francisco Brizuela, 1st Lt. PAM Carlos Gracia Caballero, Navy Lt.Commander Rolando Ibarra, Colonel Julio Cartes, all Paraguayan revolutionary officers, and Dr. Silvio Mascias. The only three survivors were Alcides Perdomo, Cornelius Dineen and Major Alejandro Sienra.

12 Dogfights

In the final weeks of this conflict, there were only two air-to-air combats. The first one took place on 5 August when a Revolutionary Air Arm Vultee BT-13 crewed by 1st Lt. PAM Ángel Doldán as the pilot and 1st Lt. MAM Marcos Schulz as the gunner, on a reconnaissance mission near Piquete-Cué was intercepted and attacked by a Government Air Arm N.A. AT-6C with 1st Lt. PAM Horacio Acosta and Lt.PAM César Giménez. The rebel pilot was severely wounded in his neck and fainted, but Lt. Schulz was able to control the Vultee and dived to escape, finally landing at Villa Hayes. On the same day, revolutionary BT-13s and the single AT-6C bombed several government positions in Asunción, causing some casualties.

Three days later, a Government Air Arm Vultee BT-13, crewed by Major PAM Epifanio Ovando and Lt. PAM Aníbal González, was attacked by a rebel AT-6C with 1st Lt. PAM Nicolás Aparicio as the pilot and again 1st Lt. MAM Marcos Schulz as the gunner, over Asunción. Neither of them could shoot down the enemy aircraft and they both returned to their bases with several bullet holes.

13 The final days of the Revolution

The rebel fleet finally reached an area called Arecutacuá, some 40 kilometers north of Asunción, on 4th August. The rebel army disembarked and split into three columns to advance towards the capital, one of them led by Lt.Col. Antonio Granada with the mission of capturing the town of Limpio first and then the Government cavalry base in Campo Grande; the second one, led by Major Hermes Saguier, whose target was the city of Luque and Ñu-Guazú Air Base; and the third, led by Col. Rafael Franco, the cities of Altos, San Bernardino, Ypacaraí, San Lorenzo and Fernando de la Mora. Once they had conquered those towns, the advance toward Asunción was going to be secure. Since this operation took eight days instead of the original 40 hours, the Government Army was getting closer in its march towards the capital.

During the first weeks of the conflict, a short air strip had been built behind the presidential residence in Asunción and there was always a Fairchild PT-19 and a pilot ready for President Morinigo in case of a sudden revolutionary attack on the capital.

Since the rebel troops were advancing quickly towards Luque and Ñu-Guazú, an order was issued by the government to evacuate the air base. All flyable aircraft were flown to the city of Pilar, in the south of the country, and vital parts were removed from those planes that could not be taken, so the revolutionaries could not use them. The revolutionary forces captured the air base and found it deserted, with all the hangars and offices locked. They did not find anything of use and soon abandoned the place.

Communications among the three columns were very deficient and some revolutionary commanders did not coordinate their attacks on the capital; many of them believed that the government troops were already in Asunción and in order to avoid a massacre, they chose exile, with their troops, in Argentina. Meanwhile, there were bloody battles in the outskirts of the capital, with many casualties, causing the rebel troops to disband.

1st Lt. MAM Marcos Schulz, revolutionary gunner in the two dogfights against government aircraft. (*Instituto de Historia y Museo Militar del MDN*)

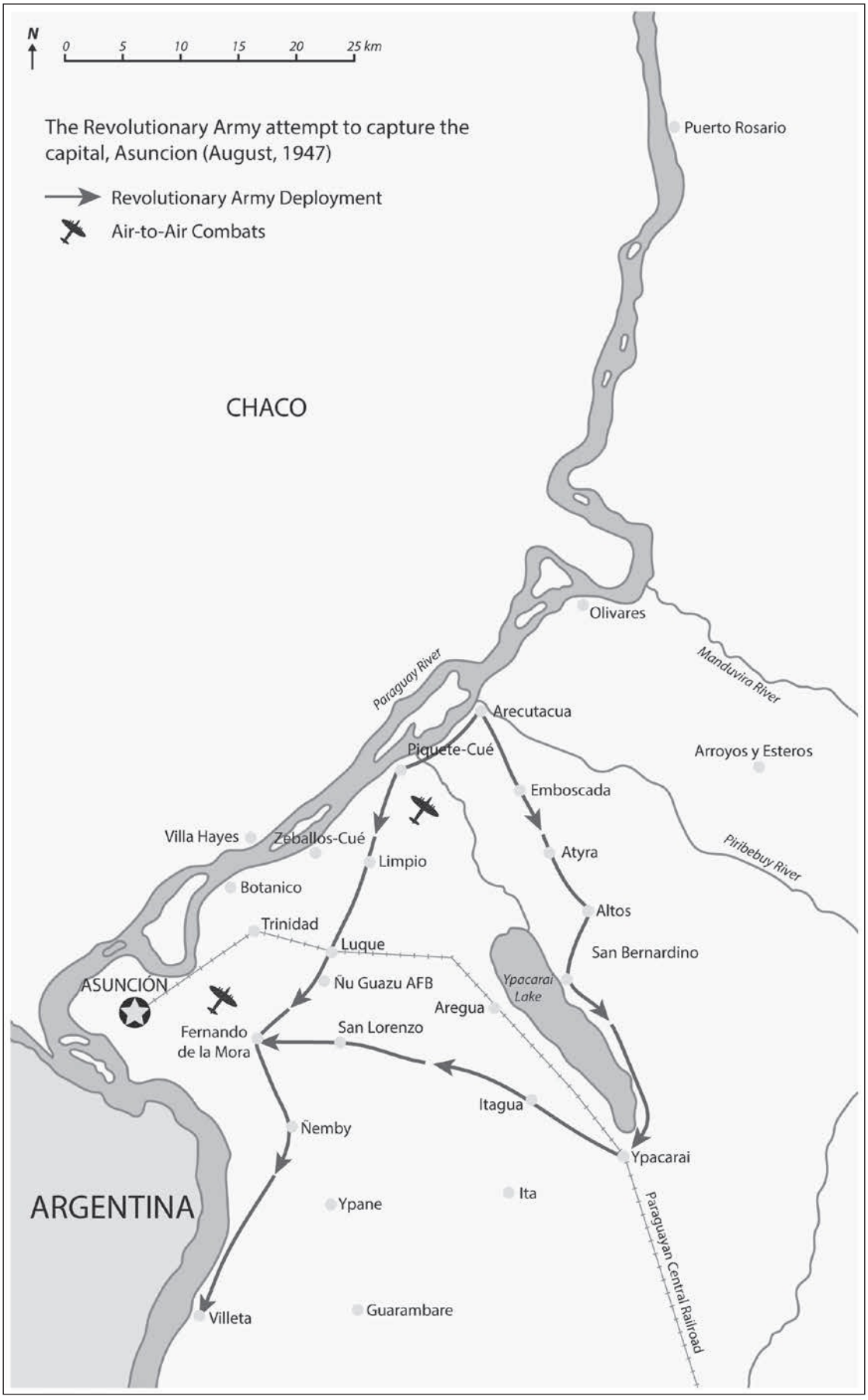
By 19 August, the rebels realized that fighting was useless. On that day, the remaining flyable aircraft of the Revolutionary Air Arm took off to different destinations. A couple of PT-19 first flew to Puerto Pinasco and then to the city of Ponta Porá in Brazil where they were interned; Two BT-13s, a Beech UC-45F and a N.A. AT-6C flew to Clorinda, Argentina; A third BT-13 remained in Puerto Pinasco due to technical problems. Regarding the Naval Aviation NAF N3N-3s, one of them crewed by Lt. Commander Peralbo flew to Formosa, Argentina, and the other with Lt. Commander Alborno and Col. Rafael Franco, to Corrientes, also in Argentina. The crews remained in those countries in exile, but all the airplanes were returned to Paraguay after a few weeks.

On 20th August, all rebel forces were finally defeated.

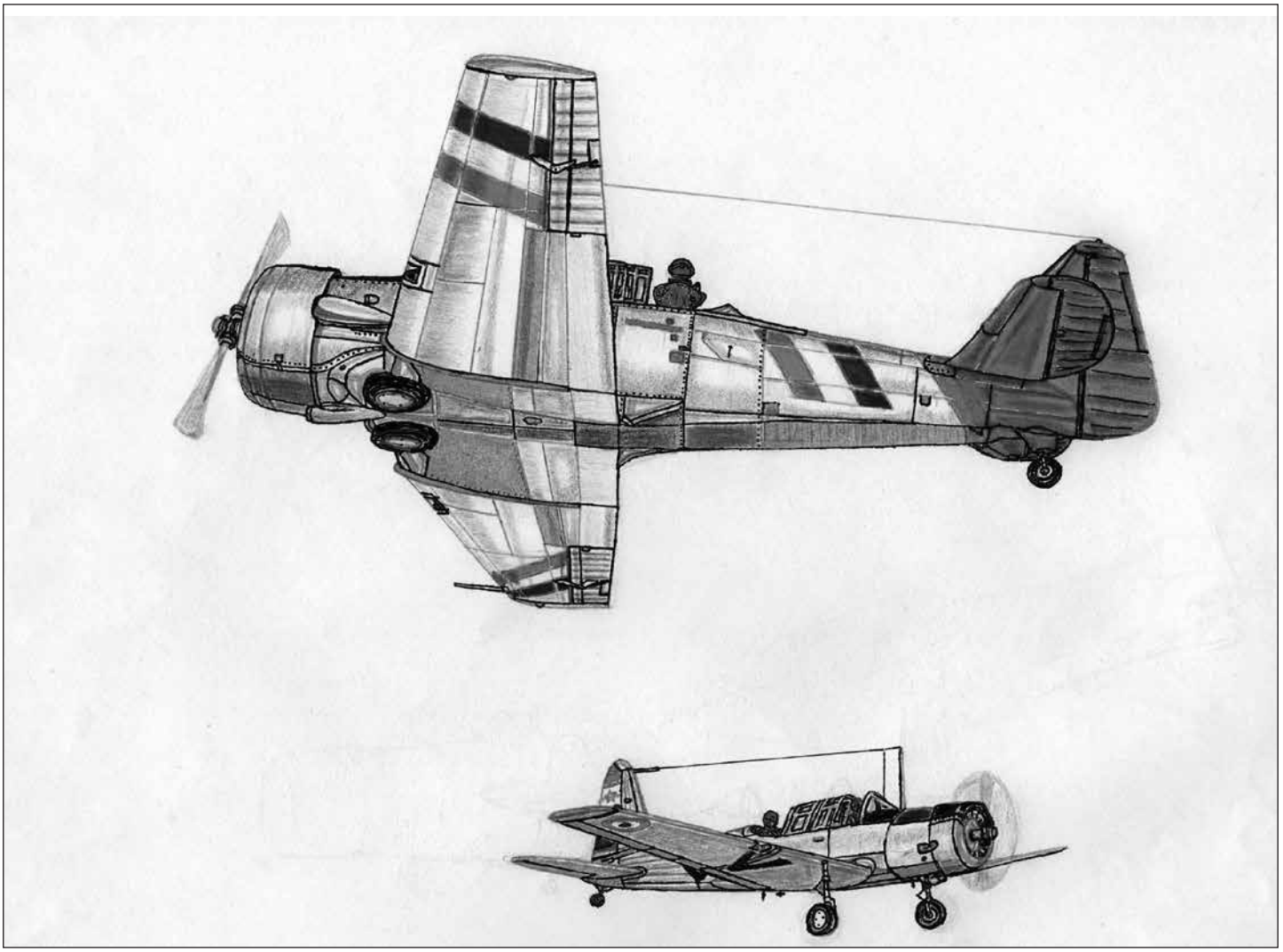
14 Conclusions

Even though the revolutionaries had the support of almost 70% of the regular Army, Navy and Air Arm officers – many of them veterans of the Chaco War – and could also count on well-trained troops, distrust, disagreements and the lack of coordination among their leaders were key factors for the disastrous final outcome. On the other side, General Morinigo, who was not exactly an influential leader, had the support of the popular *Colorado* Party which could mobilize a militia of 15,000 civilians, outnumbering the revolutionaries by far. Another advantage of the government was the control of most of the stocks of military equipment, including rifles, ammunition, pieces of artillery, heavy and light machineguns, hand-grenades, and mortars. With little training, the militia were able to use these weapons. Atrocities were committed by both sides, especially when officers were captured. During the last hours of the revolution, the remaining revolutionary troops escaped to the city of Villeta, south of Asunción, however the final assault by government troops and militia massacred them mercilessly. The lucky ones saved their lives by crossing the Paraguay River in boats or even swimming. Regarding casualties on both sides, there are no official records but according to different sources, estimates vary between 5,000 and 30,000. It is estimated that between 80,000 to 100,000 people went into exile after the revolution and most of them never returned to Paraguay. Obviously, all of the military that fought on the rebel side lost their careers, whilst on the other side, the reserve officers, NCOs and even many members of the militia who fought for the government were incorporated to the Armed Forces to complete the ranks. Almost all the loyal officers and NCOs were promoted to a higher rank during or immediately after the conflict. However, General Morinigo would not enjoy his triumph for long, since he was removed from the Presidency of Paraguay by a coup just ten months after the end of the Revolution.

Regarding air power, most aircraft available to both Air Arms were basically trainers, with very limited capability for combat. The only real fighters, the *Fiat* C.R.32s, were not in flying condition; the Caproni AP-1 dive bombers were limited to just three examples and the veteran Potez 25 bombers had not been in service since the early 1940s. Of all the Lend-Lease aircraft donated by the U.S. Government, only the three N.A. AT-6Cs could be armed with some bomb load capacity. However, as has been previously mentioned, aircraft mechanics of both sides would mount a rather primitive ventral bomb rack in a few of the BT-13s, but the other types, PT-19s and the N3N-3s were mainly used for reconnaissance and liaison missions. Had the Republic P-47 Thunderbolt fighters been delivered in 1945, the story would have been very different.



The Revolutionary Army failed assault to the Capital Asuncion in August 1947. (Map by George Anderson)



The First dogfight of the Revolution of 1947 between a Government Air Arm N.A. AT-6C and a Revolutionary Air Arm Vultee BT-13 over Piquete-Cué on 5th August. (Artwork by Ruben Sandri

15 The Paraguayan Military Aviation aircraft in 1947

The Paraguayan Air Arm

Aircraft	mc/n	Serial	Remarks
Fairchild PT-19A-FA	T42-3506	40	USAAF 42-33840. Lend-Lease. Delivered 16.02.43
Fairchild PT-19A-FA	T42-3507	41	USAAF 42-33841. Lend-Lease. Delivered 16.02.43
Fairchild PT-19A-FA	T42-3508	42	USAAF 42-33842. Lend-Lease. Delivered 16.02.43
Fairchild PT-19A-FA	T42-3509	43	USAAF 42-33843. Lend-Lease. Delivered 16.02.43
Fairchild PT-19A-FA	T42-3510	44	USAAF 42-33844. Lend-Lease. Delivered 16.02.43
Fairchild PT-19A-FA	T42-3511	45	USAAF 42-33845. Lend-Lease. Delivered 16.02.43
Fairchild PT-19A-FA	T42-3512	46	USAAF 42-33846. Lend-Lease. Delivered 16.02.43
Fairchild PT-19A-FA	T42-3513	47	USAAF 42-33847. Lend-Lease. Delivered 16.02.43
Fairchild PT-19A-FA	T42-3514	48	USAAF 42-33848. Lend-Lease. Delivered 16.02.43
Fairchild PT-19A-FA	T42-3515	49	USAAF 42-33849. Lend-Lease. Delivered 16.02.43
Fairchild PT-19A-FA	T42-3658	92	USAAF 42-33992. Lend-Lease. Delivered 09.12.42
Fairchild PT-19A-FA	T42-3659	93	USAAF 42-33993. Lend-Lease. Delivered 09.12.42
Fairchild PT-19A-FA	T42-3660	94	USAAF 42-33994. Lend-Lease. Delivered 09.12.42
Fairchild PT-19A-FA	T42-3661	95	USAAF 42-33995. Lend-Lease. Delivered 09.12.42
Fairchild PT-19A-FA	T42-3662	96	USAAF 42-33996. Lend-Lease. Delivered 09.12.42
Fairchild PT-19A-FA	T42-3663	97	USAAF 42-33997. Lend-Lease. Delivered 09.12.42
Fairchild PT-19A-FA	T42-3664	98	USAAF 42-33998. Lend-Lease. Delivered 09.12.42
Fairchild PT-19A-FA	T42-3665	99	USAAF 42-33999. Lend-Lease. Delivered 09.12.42
Vultee BT-13A	7228	98 Later 0051	USAAF 41-22798. Lend-Lease. Delivered 12.42
Vultee BT-13A	7229	99 Later 0053	USAAF 41-22799. Lend-Lease. Delivered 12.42
Vultee BT-13A	7230	100 Later 0055	USAAF 41-22800. Lend-Lease. Delivered 12.42
Vultee BT-13A	7231	101 Later 0057	USAAF 41-22801. Lend-Lease. Delivered 12.42
Vultee BT-13A	7232	102 Later 0059	USAAF 41-22802. Lend-Lease. Delivered 12.42
Vultee BT-13A	8128	64 Later 0061	USAAF 42-1364. Lend-Lease. Delivered 01.43
Vultee BT-13A	8129	65 Later 0063	USAAF 42-1365. Lend-Lease. Delivered 01.43
Vultee BT-13A	8130	66 Later 0065	USAAF 42-1366. Lend-Lease. Delivered 01.43
Vultee BT-13A	8131	67 Later 0067	USAAF 42-1367. Lend-Lease. Delivered 01.43
Vultee BT-13A	8132	68 Later 0069	USAAF 42-1368. Lend-Lease. Delivered 01.43
Vultee BT-13A	1778	No serial	USAAF 41-1668. NC54434. LV-NNW. Delivered 16.06.47 W/O 19.06.47
Vultee SNV-2	79-404	No Serial	U.S. Navy Bu 52372. LV-NYN. Delivered 16.06.47
North American AT-6C-NT	88-11133	78 Later 0101	USAAF 41-32778. Lend-Lease. Delivered 16.02.43
North American AT-6C-NT	88-11134	79 Later 0103	USAAF 41-32779. Lend-Lease. Delivered 16.02.43
North American AT-6C-NT	88-11135	80 Later 0105	USAAF 41-32780. Lend-Lease. Delivered 16.02.43
Beechcraft UC-45F	C18S-6939	T-3	USAAF 44-47069. Lend-Lease. Delivered 04.45
Beechcraft UC-45F	C18S-7974	T-5	USAAF 44-47566. Lend-Lease. Delivered 04.45
Avro 652A Anson Mk.V	MDF-19	T-7	RCAF 11648. CF-ELT. LV-ADI. Delivered 1947

Travel Air S6000B	6B-1029	T-9	TAT NC9815. Delivered 1933. Later ZP-SED in LATN
Travel Air S6000B	6B-2011	T-2	TAT NC624K. Delivered 1933. Later ZP-SEC in LATN.
Caproni Ca.309 Ghibli	371	T-3	New from factory. Delivered 1939. Later ZP-TAL in LATN.
Caproni Ca.309 Ghibli	372	T-5	New from factory. Delivered 1939. Later ZP-TAM in LATN.
Caproni-Bergamaschi Ca.308 AP-1	MM75293	2.1	New from factory. Delivered 1939.
Caproni-Bergamaschi Ca.308 AP-1	MM75294	2.3	New from factory. Delivered 1939.
Caproni-Bergamaschi Ca.308 AP-1	MM75295	2.5	New from factory. Delivered 1939.
Caproni-Bergamaschi Ca.308 AP-1	MM75296	2.7	New from factory. Delivered 1939.
Caproni-Bergamaschi Ca.308 AP-1	MM75297	2.9	New from factory. Delivered 1939.
Caproni-Bergamaschi Ca.308 AP-1	MM75298	2.11	New from factory. Delivered 1939.
Caproni-Bergamaschi Ca.308 AP-1	MM75299	2.13	New from factory. Delivered 1939. W/O 1940
Boeing-Stearman PT-17-BW	753339	32	USAAF 41-25732. Lend-Lease. Not delivered.
Boeing-Stearman PT-17-BW	753340	33	USAAF 41-25734. Lend-Lease. Not delivered.
Boeing-Stearman PT-17-BW	753341	34	USAAF 41-25734. Lend-Lease. Not delivered.
Boeing-Stearman PT-17-BW	753342	35	USAAF 41-25735. Lend-Lease. Not delivered.
Boeing-Stearman PT-17-BW	753343	36	USAAF 41-25736. Lend-Lease. Not delivered.
Boeing-Stearman PT-17-BW	753451	49	USAAF 41-25749. Lend-Lease. Not delivered.
Boeing-Stearman PT-17-BW	753452	50	USAAF 41-25750. Lend-Lease. Not delivered.
Boeing-Stearman PT-17-BW	753453	51	USAAF 41-25751. Lend-Lease. Not delivered.
Boeing-Stearman PT-17-BW	753454	52	USAAF 41-25752. Lend-Lease. Not delivered.
Boeing-Stearman PT-17-BW	753455	53	USAAF 41-25753. Lend-Lease. Not delivered.

The Paraguayan Naval Aviation

Aircraft	mc/n	Serial	Remarks
Naval Aircraft Factory N3N-3	?	E-3	Lend-Lease. Delivered in 1943.
Naval Aircraft Factory N3N-3	?	E-5 Later NAVAL 126	Lend-Lease. Delivered in 1943.

Sources

Angulo, Renato. *Los combates Aéreos en el Paraguay, 1922-1935.* (Editorial El Lector S.A. Asunción, 2016).

Anuario de la Academia de Historia Militar del Paraguay. (Vol. IV, Asunción. 1991).

Ashwell, Washington. *Concepción 1947.* (Ed. Servilibro. Asunción. 2007).

Bray, Arturo. *Armas y Letras.* Volume 1. (Ediciones NAPA. Asunción. 1981).

Busto, General de División Gustavo Prieto. *Apuntes para la Historia.* (Imprenta Militar. Asunción. 1987).

Delvalle, Alcibíades González. *El Drama del 47. Documentos secretos de la Guerra Civil.* (Editorial Histórica. Asunción. 1987).

Echeveste, Oscar Barcena. *La Revolución de 1947.* (Editorial El Lector. Asunción. 1983).

English, Adrian. *La Guerra Civil Paraguaya 1922-1923.* (Fundación Histarmar. Historia y Arqueología Marítima. http://www.histarmar.com.ar).

English, Adrian. *Operaciones Navales en la Guerra Civil Paraguaya, 1922-1923.* (Fundación Histarmar. Historia y Arqueología Marítima. http://www.histarmar.com.ar).

English, Adrian. *Revolutions, Civil Wars and Coups D'Etat. Internal Disturbances in Paraguay during the 20*th *Century.* (Partizan Press. UK. 2011).

Ferreira, Saturnino. *Proceso Político del Paraguay. Una visión desde la prensa. La Revolución de 1947.* Volume III. (Editorial El Lector. Asunción. 1987).

Franco, Coronel (SR) Sixto Dure. *La Revolución de 1947 y otros recuerdos.* (Editorial Histórica. Asunción. 1987).

Galeano, Tcnel. DEM (SR) Alfredo. *Recuerdos y Reflexiones de un Soldado.* (Criterio Ediciones. Asunción. 1990).

Gaona, Enrique Volta. *La Revolución del 47.* (Editora Litocolor. Asunción. 1982).

Hagedorn, Daniel P., *Latin American Air Wars and Aircraft, 1912-1969.* (Hikoki Publications/Specialty Press; 1st edition. UK. 2006).

Monges, Capitán PAM (SR) Félix Zarate. *La Aviación Paraguaya antes y durante la Guerra del Chaco.* (Offset Leguizamón. Asunción. 1988).

New York Times, *More fighting in Paraguay – Rebels drive off a government gunboat.* (New York. 24th June, 1922 edition).

Pampliega, Amancio. *Fusil al hombro.* (Ediciones NAPA. Asunción. 1982).

Pereira, Humberto Osnaghi. *La Libertad viene del Norte. La Revolución de Concepción 1947*. (Ed. Arandurá. Asuncíon. 2004).

Ramos, Alfredo. *Semblanzas Militares.* Volumes 1 & 2. (CRITERIO-Ediciones. Asunción 1987).

Ramos, Coronel (SR) Alfredo. *Concepción 1947.* (Editorial Histórica. Asunción. 1985).

Registro Oficial, (Paraguayan Government Official Register, published between 2nd January to 16th September 1947. Asunción).

Rivarola, Vicente. *Memorias Diplomaticas.* Volume I. (Editorial Servilibro. Asunción. 2007).

Santos, Tomas de los. *La Revolución de 1922.* Volumes 1 & 2. (Editorial El Lector S.A., Asunción 1984).

Sapienza Fracchia, Antonio Luis. *Historia Gráfica de la Fuerza Aérea Paraguaya, 1913-2013.* (Fuerza Aérea Paraguaya. Base Aérea de Ñu-Guazú. Luque. 2013).

Sapienza, Antonio. *La Aviación en la Revolución de 1922 en Paraguay*. (Air & Space Power Journal, No.2, U.S.A. 2006).

Sapienza, Antonio. *La Contribución Italiana en la Aviación Paraguaya*. (Author's edition. Asunción. 2007).

Seiferheld, Alfredo M. *Estigarribia – Veinte Años de Historia Paraguaya*. (Editorial Servilibro. Asunción 2011).

Valiente, Wilfrido Albino Molinas. *De lo visto, vivido y oído de la Revolución de 1947.* (Editora Litocolor. Asunción. 2008).

Vierci, Sub. Tte. Inf. Miguel Ángel González. *El Estallido de un Ideal.* (Editorial Arandurá. Asunción. 2007).

Zavala, Roberto Sienra. *Memorias de un Concepcionero.* (Author's edition. Concepción. 2006).

See also various articles in *La Tribuna*, *El País*, *El Colorado*, *La Razón*, (newspapers published in Asunción between 13th March to 10th September 1947).

Acknowledgments

The author is deeply thankful to the late Colonel MAM (Ret.) Agustín Pasmor and Colonel PAM (Ret.) Enrique Déntice, 1st Lt. PAM (Ret.) Pedro Cataldo, Adrian J. English, Santiago Rivas, Daniel P. Hagedorn, Renato Angulo, Francisco Halbritter, Roberto Gentilli, *Fuerza Aérea Paraguaya* (FAP), *Aviación Naval Paraguaya* (ANP), *Instituto de Historia y Museo Militar del Ministerio de Defensa Nacional* (MDN), *Armada Paraguaya*, all the nice personnel of the *Biblioteca Nacional* and the *Franklin Delano Roosevelt* Library of the *Centro Cultural Paraguayo-Americano*, among others, for their invaluable help.

About the author

Antonio Luis Sapienza Fracchia was born in Asunción, Paraguay on 14th May 1960. He graduated from the *Catholic University of Asunción* where he got a B.A. in Clinical Psychology. He also took specialized English courses at *Tulane University* of New Orleans, Louisiana, USA and *San Diego State University* in California. He is at present an English Teacher and one of the Academic Coordinators at the *Centro Cultural Paraguayo-Americano (CCPA)*, a binational institute in Asunción. Married with two children, he resides in the capital.

He is an Aviation Historian and a founding member of the *Instituto Paraguayo de Historia Aeronáutica "Silvio Pettirossi"*. He is also a corresponding member of similar institutes and academies in Argentina, Bolivia, Chile, Colombia, Spain, the United States and Uruguay. He wrote more than 500 articles in specialized magazines and webpages on the Paraguayan Aviation history, and has given numerous lectures in schools, universities, institutes, military and civil institutions in Paraguay and abroad. Since 2010, he has been an aviation history professor in the Paraguayan Air Force (FAP).

He has published 11 books since 1996 and this is his second volume in Helion. He is also preparing more titles for the Latin America @ War series.

He has received five decorations, two from Argentina, one from Brazil and two from Paraguay, one from the Air Force and the other from the National Civil Aeronautics Authority.